APRIL 4, 1955

How to Lose a War . . . p. 39

# RAILWAY AGE

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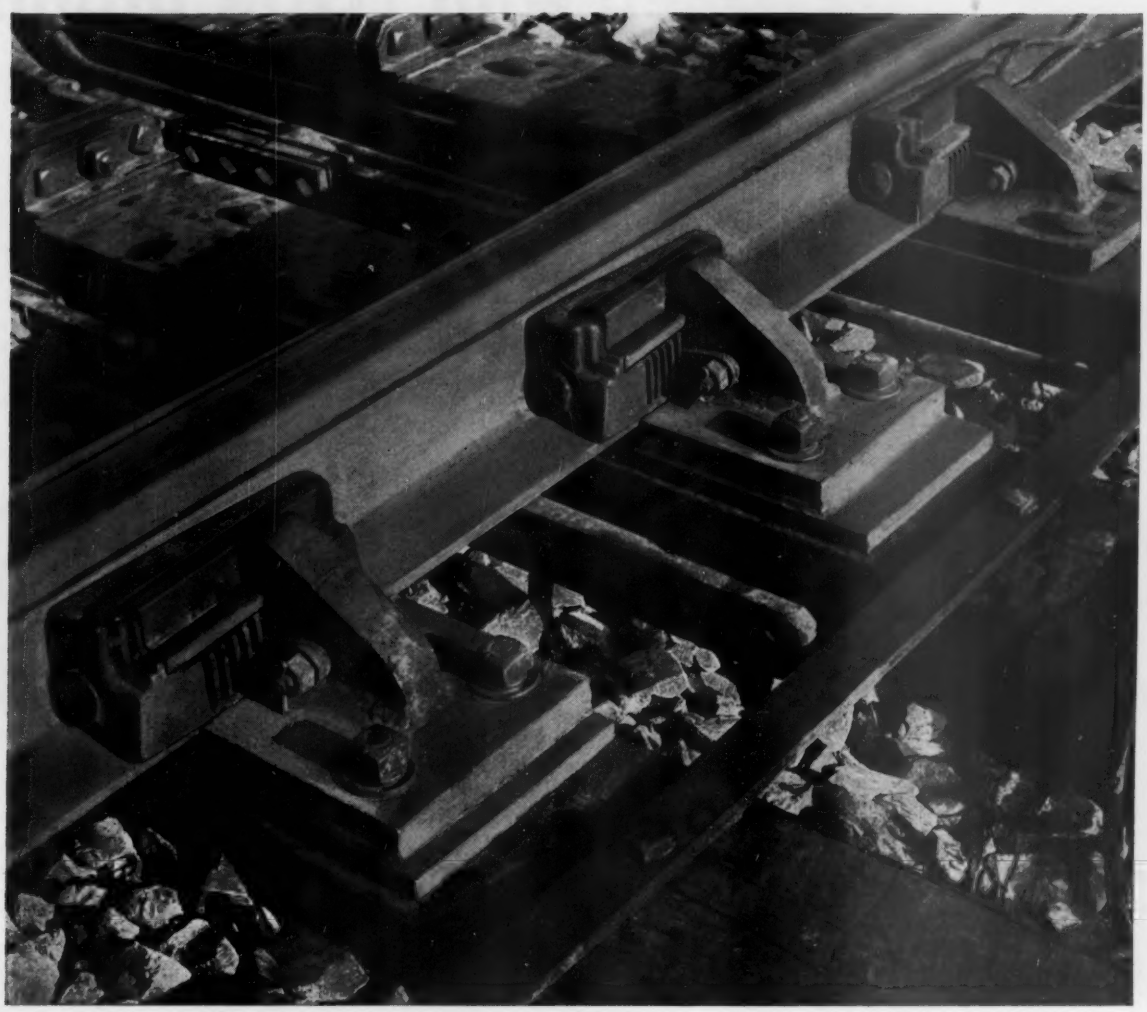

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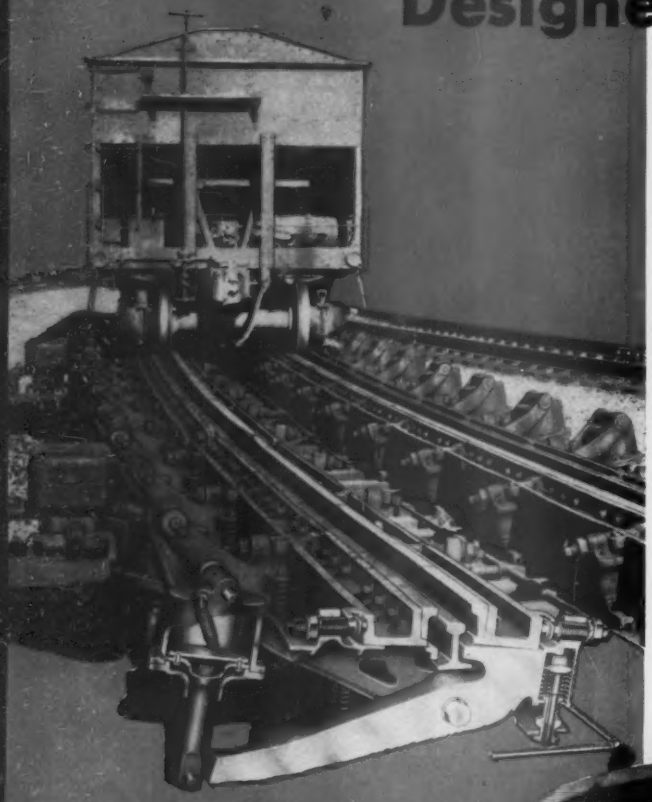

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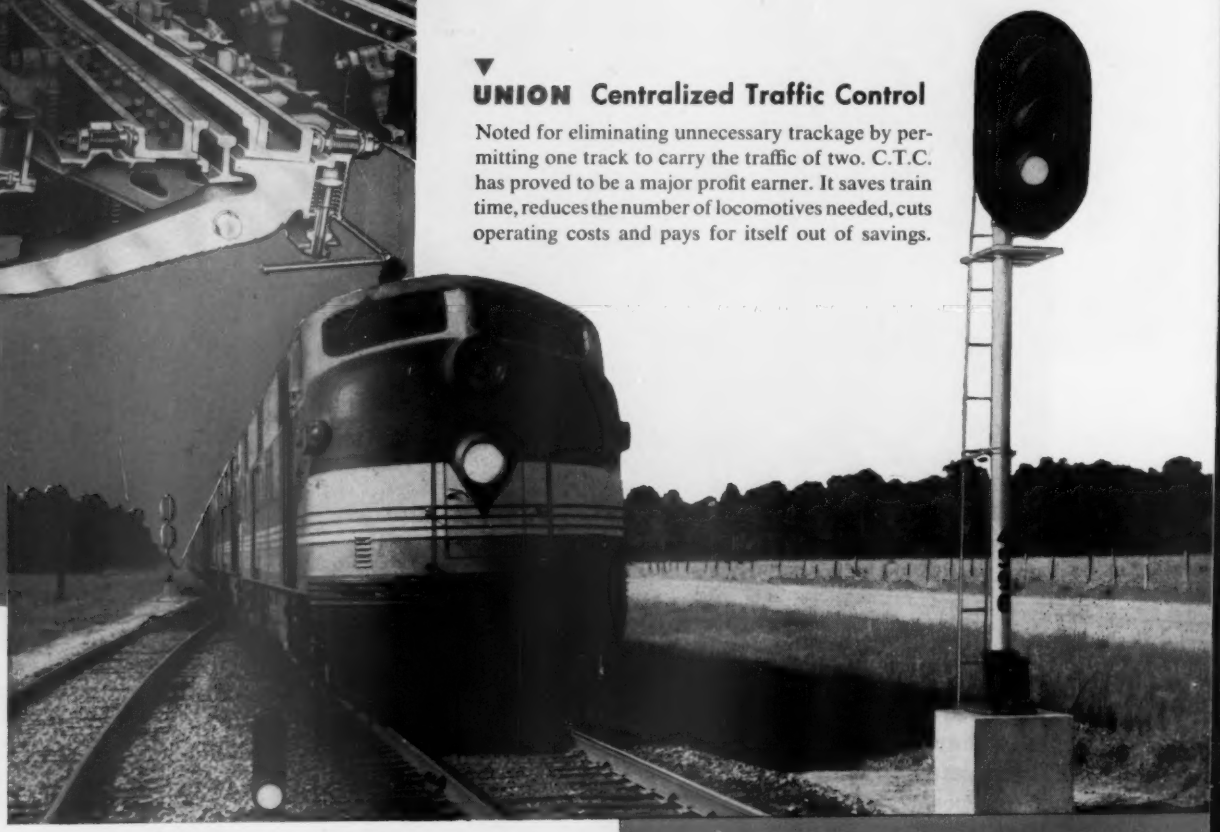

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**April 4, 1955** **Vol. 138, No. 14**


## Week at a Glance

**"Review and modernization,"** by a special commission, of the whole railway wage rate structure as it applies to operating employees has been recommended by the emergency board which rejected an ORCB demand for pay based on weight-on-drivers of locomotives. 7

**Those orders for new trains**—of the low-slung, lightweight, high-speed type—which we predicted on this page last week, became quick realities. Pullman will build, and Baldwin will power, two such trains—one for the New York Central and one for the New Haven; a third train, of the "Talgo" type, will be built for the NH by ACF, with General Motors diesel locomotives. And, says the NYC, "it will take the first of GM's new lightweight trains, including motive power." 8

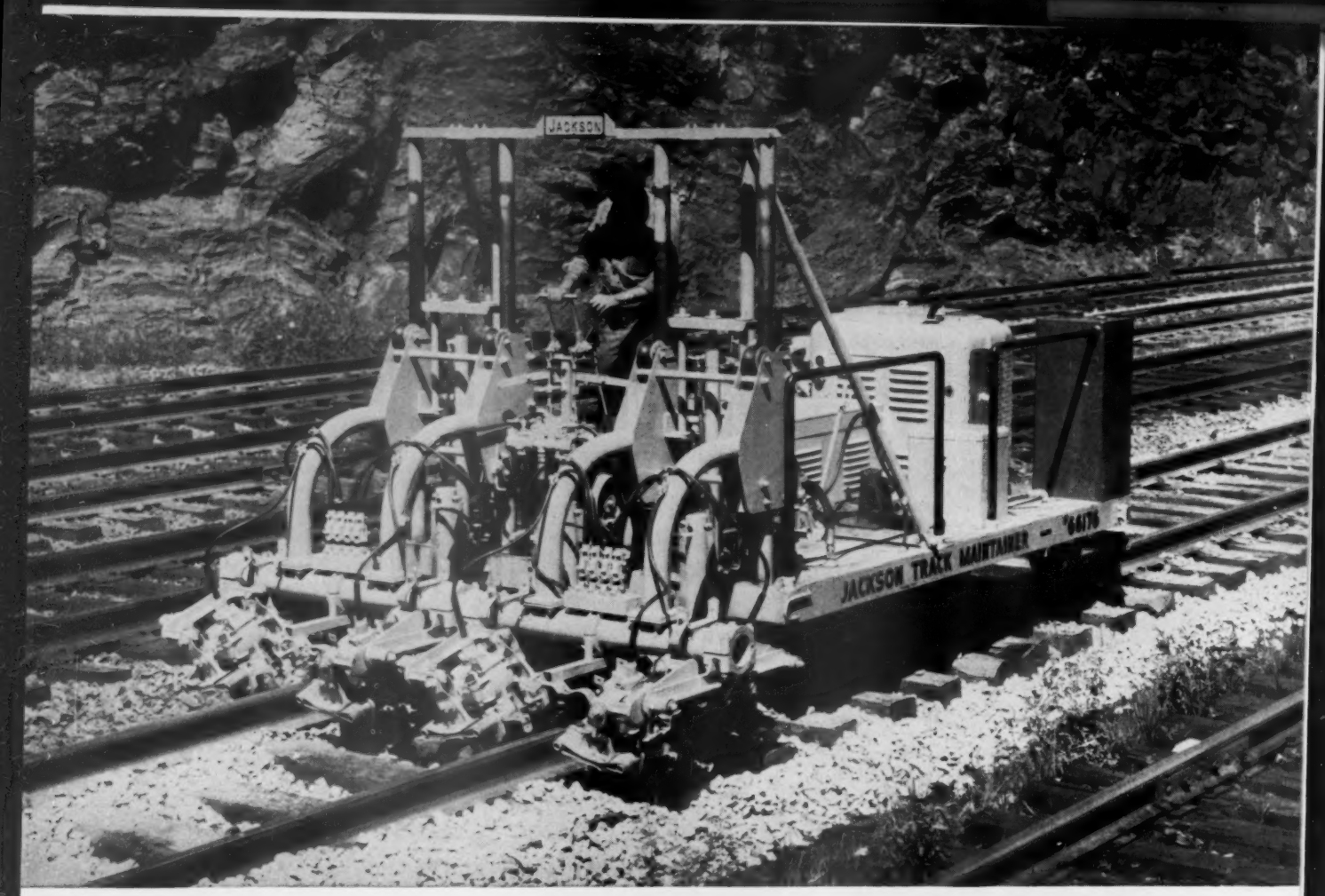
**FORUM—How to bring on a war and lose it.** Manipulators of public opinion must lighten their pressures on our government leaders—encourage them to make better use of our resources—because waste spells weakness, and weakness invites attack and the risk of defeat. The men behind the iron curtain know they can't afford waste, and are working accordingly. Who'll be on top in the event of a show-down? 39

**Electrification gets "vitamins"** on the Milwaukee, as its 40-year-old electric traction system keeps pace with diesels in efficiency and economy of operation. 40

**Modern hump yard at Minot, N. D.,** on the Great Northern, promises the latest in yard design with automatic classification and other features. 44

**How the U. S. can save millions,** by businesslike management of its traffic activities, is detailed in a Hoover Commission report based largely on the findings of a "task force" headed by Lackawanna President Perry M. Shoemaker. 46

**Equipment can prevent damage.** A Pullman-Standard

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## Current Statistics

| | |
|---|---|
| Operating revenues, one month | |
| 1955 | $752,741,347 |
| 1954 | 749,825,835 |
| Operating expenses, one month | |
| 1955 | $590,002,298 |
| 1954 | 626,806,095 |
| Tax i, one month | |
| 1955 | $ 74,547,270 |
| 1954 | 71,488,503 |
| Net railway operating income, one month | |
| 1955 | $ 68,660,196 |
| 1954 | 32,545,876 |
| Net income, estimated, one month | |
| 1955 | $ 52,000,000 |
| 1954 | 20,000,000 |
| Average price railroad stocks | |
| March 29, 1955 | 91.26 |
| March 30, 1954 | 60.53 |
| Carloadings, revenue freight | |
| Eleven weeks, 1955 | 7,081,497 |
| Eleven weeks, 1954 | 6,761,723 |
| Average daily freight car surplus | |
| Wk. ended March 26, 1955 | 30,789 |
| Wk. ended March 27, 1954 | 133,080 |
| Average daily freight car shortage | |
| Wk. ended March 26, 1955 | 1,532 |
| Wk. ended March 27, 1954 | 158 |
| Freight cars on order | |
| March 1, 1955 | 18,663 |
| March 1, 1954 | 25,441 |
| Freight cars delivered | |
| Two months, 1955 | 4,430 |
| Two months, 1954 | 8,918 |
| Average number railroad employees | |
| Mid-February 1955 | 1,008,740 |
| Mid-February 1954 | 1,084,097 |

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## Week at a Glance CONTINUED

contribution toward that end is its new cushion-underframe car, which promises to cut claims more than 50%. 48

**30th Better Service Conference** held by the N&W at Roanoke was attended by more than 500 delegates from local Better Service Clubs throughout the system. 50

**The NP and the UP got awards** for their passenger service and their public relations, respectively, from the Federation for Railway Progress. 52

### BRIEFS

**The non-op strike which has crippled** the Louisville & Nashville, the Nashville, Chattanooga & St. Louis and the Clinchfield, was still in effect at presstime for this issue. John E. Tilford, L&N president, said the unions have rejected "four separate and definite offers" made by the carriers.

**An event unusual**, if not unique, in recent railroad history took place at Alexander City, Ala., March 30, when the city actually *gave* a modern railroad station to the Central of Georgia. Metropolitan areas please note!

**Chicago has agreed** to put a rapid transit line in the center of a proposed express highway to the northwestern edge of the city. City planning experts agree such a line can handle more than twice as many passengers as the highway itself and it could be built at relatively low cost (financed, possibly, as part of the highway project).

**Oil pipe line revenues** gushed upwards by 108.5% from 1946 to 1954, while traffic volume rose 71.8%, according to the March 18 "Monthly Comment" of the ICC Bureau of Transport Economics & Statistics. Sharing this bigger ($570-million, 3.6-billion-barrel) "pie" however, were 64 large pipe line companies, whereas only 44 split up the $273-million, 2.1-billion-barrel "pie" of 1946.

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# Special Board Urges Wage Study

**Recommends establishment of commission to "review and modernize" structure applicable to operating employees—Rejects demand for weight-on-driver basis for conductors**

Establishment of a commission "to review and modernize the wage rate structure as a whole of the operating classifications in the railroad industry" has been recommended by the emergency board which was appointed by President Eisenhower to investigate the demand of the Order of Railway Conductors & Brakemen for a graduated pay scale on the weight-on-driver basis for conductors and brakemen.

The board recommended that the demand be withdrawn, but that conductors in through freight service be given a raise "designed to eliminate the inequity" in their average basic daily rates. The latter recommendation was based on the board's conclusion that its data on wage relationships "highlight a disparity in average basic daily rates for conductors in through freight service as compared to other operating classifications." The disparity has become "substantial" in recent years and "has grown rapidly," the report also said, adding the other wage relationships "reflect no such marked or rapid displacement."

**The raise** for the through-freight conductors could be a straight increase in their basic daily rates, the board suggested. "Other methods will occur to experienced negotiators that may be even more suitable," the report also said.

Members of the board were Chairman Edward M. Sharpe, Charles A. Sprague, and John T. Dunlop. They made their report to the President last week, after having obtained three extensions of time with the agreement of the parties.

Representatives of the ORCB and the carriers were scheduled to meet in Chicago April 4 to consider the recommendations.

**The commission study** which the board had in mind would be a "comprehensive" survey, independent of any particular proposal for specific adjustments. The commission, as the board saw it, should be composed of "senior negotiators" representing the parties, and "several neutrals" with experience in collective bargaining and wage structure problems. One of the "neutrals" would be chairman.

The initiative for the establishment of such a commission "ideally" would come from the carriers and the interested unions, the board suggested. It added, however, that the initiative "could come from government agencies concerned with railroad problems, such as the National Mediation Board, the Interstate Commerce Commission, the Secretary of Labor, or from the committees of Congress, or the President." NMB was called "the proper agency to conduct an initial exploration."

**"The objective** of the commission," the emergency board said, "should be to propose for the consideration of the carriers and the labor organizations a revised and modernized wage structure for the operating classifications. The objective is not to change the general level of rates but to reorganize the structure and pay rules. It has been the experience of industry generally that improved wage rate structures pay for themselves, while they may result in some initial rise in average earnings. In these operating classifications it should be possible to reduce average labor costs per ton-mile and per passenger-mile and increase some earnings."

Meanwhile, the board implied that the commission should see that no employee got a cut. It said that industries which have revised their wage structures have "invariably" adopted an "incumbent" rule providing that no employee shall suffer a loss. "The practical application of this principle is needed to insure the full cooperation of individual employees in the . . . program," the board advised.

Arguing in support of its view that there was need for the study it recommended, the board said there has been no comprehensive review and revision of the wage structure in the railroad industry since the government control period of World War I, when the so-called Lane commission made its study and report with recommendations which were adopted. Meanwhile, as the report put it, "comprehensive reviews and revisions of wage structures have become common in American industry," especially in the past 10 years.

**Exception**—"This comprehensive attention to wage structures," the report

## ATOMIC LOCOMOTIVE STUDY AUTHORIZED

**As briefly reported in *Railway Age* March 28, page 5, a contract for a study of a new nuclear-power reciprocating engine for locomotive propulsion was signed in Washington, D.C., March 24.**

**Admiral Lewis L. Strauss, chairman of the Atomic Energy Commission, made the announcement, while the contract itself was signed by James F. Connaughton, vice-president of the Baldwin-Lima-Hamilton Corporation, and Joseph L. Henning, Washington representative of the Denver & Rio Grande Western.**

**Under terms of the study agreement, the road and manufacturer will investigate engineering, technical and economic aspects of building and operating a nuclear-powered reciprocating engine for locomotives. The two companies will finance the study and will have at their disposal information developed by the AEC which may be applied to their research, in addition to consultation and assistance from AEC personnel as needed.**

**An AEC spokesman emphasized that there is not now any such locomotive engine under construction and said the D&RGW-BLH project does not involve building one. The study is scheduled to run for one year at the end of which time a report will be made to the AEC with recommendations for future work.**

**Heads of the two companies which will cooperate in the study said:**

***Wilson McCarthy, president, D&RGW*:—"We believe the study project authorized by the Atomic Energy Commission presages a new concept of the utilization of atomic power for railroads. The basic principle on which it rests is the result of a 15-month study by Ray McBrian, Rio Grande engineer of standards and research, working closely with research engineers of Baldwin-Lima-Hamilton. That AEC has authorized us to proceed with this study is a source of great satisfaction to us."**

***George A. Rentschler, chairman of the board, Baldwin-Lima-Hamilton Corporation*:—"It is in the best tradition of our nation that two American companies together have spent almost a year and a half developing this study proposal. Now, with the signing of the contract with AEC, we and the D&RGW will go forward on this study project which could well open the road to a new era in railroading. I pay special tribute to Fred Geitman and John Newton, our engineers, and to Ray McBrian, the D&RGW engineer, for their fine work."**

continued, "has escaped the railway industry and the operating classifications which are of particular concern here. Perhaps collective bargaining here has been preoccupied, in view of the slow pace of settlements, with more urgent problems, including adjustments in general wage changes to postwar inflation and with changes in the work week and fringe benefits."

In another place, the report referred to the "significant" role of the railroads in the national economy, and then had this to say: "A rationalized and modernized rate structure is essential to placing the railroad industry on a secure footing for peace or war. If the railroads are to maintain a strong place in the intense competition among transportation industries, their wage structure must be carefully reviewed and revised. Many railroad operations have been abandoned in recent years leaving the field to competitors and reducing employment opportunities on the railroads. A revised wage structure among types of operations might provide labor costs which would justify continuance of the service."

The board's finding that the graduated pay scales on the weight-on-drivers basis should not be extended to train service employees included this general statement: "The relationship of the work of these employees to the weight of the locomotives behind which they work is not sufficiently clear, direct and consistent to warrant incorporating in their wage structure the formula which has been applied over the years for computing the pay of the engine crew. . . The board does not find that the contribution of train service employees to railroad productivity in the operation of longer trains is clear and definite enough of itself to warrant special added compensation. . . . Under the mileage system they have had shorter time on duty for a given run at the same compensation."

## Equipment & Supplies

# Pullman Will Build 2 New Trains

### Three locomotives of 1,000-hp each to be built by Baldwin-Lima-Hamilton—All equipment is for 1956 delivery

The New York Central and the New Haven have announced signing of orders for "revolutionary low-center-of-gravity passenger trains weighing and costing about a third as much as present so-called lightweight equipment."

Coaches for the trains, the announcement added, will be built by the Pullman-Standard Car Manufacturing Company and the locomotives—one for the NYC and two for the New Haven—by the Baldwin-Lima-Hamilton Corporation.

The announcement also said the NYC has advised General Motors Corporation that the railroad will take the first of GM's new lightweight trains, including motive power, "when and if this train becomes available." According to present plans, the announcement said, the GM train "will be tested on the New Haven late this year."

Alfred E. Perlman, NYC president, addressing a March 29 luncheon meeting of the Traffic Club of New York, said the road is buying and will try out a diesel-hydraulic locomotive built in Germany.

**The Baldwin-built locomotives** for the new trains will weigh about 135,000 lb each, will be 11 ft high and 46 ft long, the announcement said. One will be at each end of the New Haven train, enabling it to operate in either direction without having to turn. Power for the locomotives will be provided by a 1,000-hp, 12-cylinder diesel engine mounted on a two-axle driving truck and delivering its power through a four-speed torque converter transmission.

One 400-hp six-cylinder unit will provide light, heat and air-conditioning for the entire train.

"The principle of packaged maintenance, rather than progressive maintenance, will be utilized," the announcement added. "After operating for several hundred thousand miles, the power units can be easily replaced and the locomotive can be quickly returned to service."

A spokesman for Baldwin-Lima-Hamilton said "certain parts of the engines may be furnished by a German manufacturer."

## Ownership of Refrigerator Cars Up, AAR Report Says

Refrigerator cars with air circulating fans have increased from an average of 53,700 cars in service in 1954 to 63,400 available this year, according to Chairman A. H. Gass, Car Service Division, Association of American Railroads.

This was cited in a reference to general increases and improvements in refrigerator equipment in Mr. Gass' March 21 report on "The National Transportation Situation."

He also noted that there will be an average of 38,282 heavily insulated cars in service in 1955, including 5,163 Canadian and 197 Railway Express refrigerator cars. There are now 685 mechanical refrigerator cars in service, the report stated.

Mr. Gass reported that Class I roads put in service 4,096 freight cars of all types and retired 9,649 in the months of January and February. As of March 1, the report states, the railroads had 18,411 cars of all types on order, as against 22,147 at the same date last year.

Total ownership as of March 1, 1955, came to 1,811,199, Mr. Gass said, and was 1,856,665 on March 1, 1954. Serviceable cars owned on the respective dates totaled 1,683,788 and 1,758,588, the report showed.

## *NEW HAVEN ORDERS "TALGO" TRAIN FROM ACF*

**The New Haven has been authorized by its directors to purchase a low-center-of-gravity, high-speed "Talgo" train from ACF Industries, Inc. It is expected that this train will be on the New Haven's tracks the latter part of this year.**

**Over 400 passengers will be accommodated in the new train. Its five coaches, each of which will consist of three articulated units, will be powered by two 1,200-hp diesel locomotives, with an extra "transition car" for third-rail electric operation into Grand Central Terminal in New York.**

**To facilitate quick turnaround, the train will have a locomotive at each end, manufactured by the Electro-Motive Division of General Motors Corporation.**

**The entirely new "Talgo" train is the product of research in the United States and experience in Spain, and has all the latest technical advances which ACF engineers have developed since the original "Talgo" was completed in 1949. That train was the demonstrator which was tried out on the main line of New Haven last summer.**

**Advantages of the new "Talgo" are said to be "strength, improved riding qualities, easy coupling and uncoupling, complete reversibility, and high average speeds." The train will weigh, per passenger, about half of the average streamliner in use today. Center of gravity will be about two feet lower than conventional equipment, and the floor will be only 26 in. above the rails, compared with 54 in. on standard trains.**

**The "Talgo" train ordered by the New Haven from ACF is in addition to another lightweight train which the New Haven is buying from the Pullman-Standard Car Manufacturing Company, as reported elsewhere on this page.**

# Santa Fe Goes to "Hi-Levels"

## New passenger cars represent a reversal of "low-slung" trend—Will be used to re-equip "El Capitan"

A new train with greater "customer appeal"—one that will give the passenger "more for his travel dollar"—is what the Santa Fe is aiming for in re-equipping its all-chair-car train, "El Capitan," by mid-1956. The Chicago-Los Angeles streamliner will then have new "hi-level" coaches, dining cars and dome-lounge cars.

An order for 47 of the "hi-level" cars, including 35 chair cars, six diners, and six full-length dome-lounge cars, was announced by the Santa Fe March 25 (*Railway Age*, March 28, page 7). The cars, to be built by the Budd Company, are a move in the other direction from the so-called low-slung trains ordered by four other railroads—the Rock Island, the Pennsylvania, the New Haven and the New York Central.

The new cars, plus two experimental "hi-level" coaches already in service, will provide five "El Capitan" train sets, each consisting of seven chair cars, one diner and one dome-lounge car.

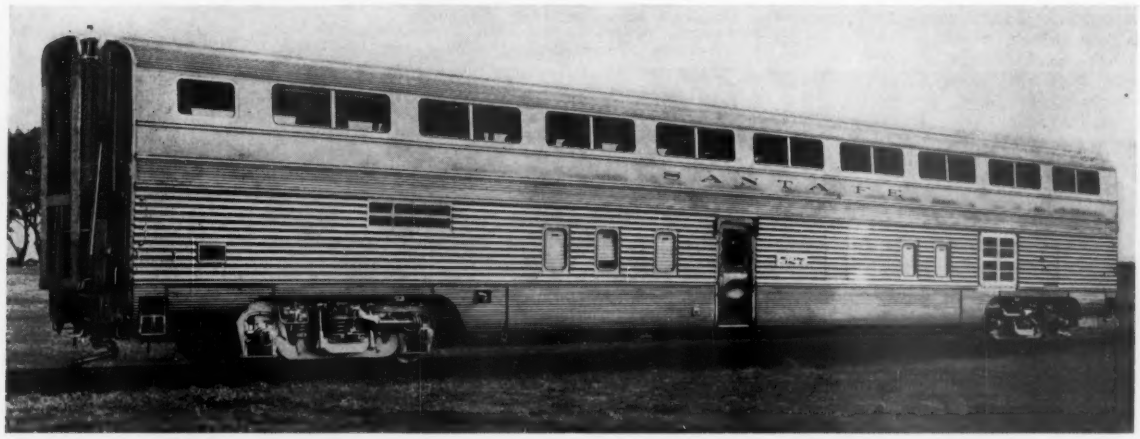
**"Customer Appeal"**—Decision to order the new cars was based, according to Santa Fe President Fred G. Gurley, on "favorable public acceptance" of the two experimental units which have been in service since the middle of 1954. These cars were fully described in *Railway Age*, September 13, 1954, page 24.

"It has become increasingly evident to us," Mr. Gurley also said, "that the trend in railroad passenger business has been toward chair-car travel. This new train will have greater customer appeal. The patron will receive more for his travel dollar. At the same time this improved service will result in increased economy which we have been striving to reach in our passenger operations.

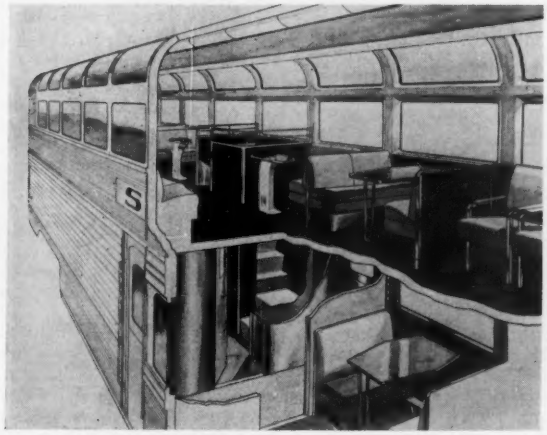
"The new 'El Capitan,' . . . with the safety and comfort implicit in rail travel, will offer the most comfortable way to make a journey. With family fares available and with a system in effect for renting an automobile at nominal cost at destination, the traveler will find it difficult to equal the new 'El Capitan' no matter which other form of transportation he considers using."

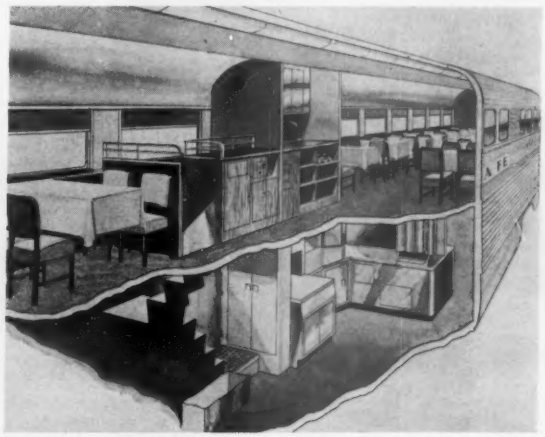
The new cars will be 15½ ft. high or two feet higher than conventional equipment. Passengers will have a "panoramic view" through spacious windows from reclining seats eight feet above the rails, or four feet higher than the floor of a regular chair car. The extra elevation is said to provide a smoother and more enjoyable ride with less noise and vibration.

**More Seats**—The double-level arrangement, which eliminates vestibules, will provide 28 more seats for passen-




**"FAVORABLE PUBLIC ACCEPTANCE" of this and another experimental "hi-level" car led to the Santa Fe's decision to buy 47 more cars of the same general type to completely re-equip "El Capitan," between Chicago and Los Angeles. All cars will be built by the Budd Company.**





**THE ORDER INCLUDES 35 chair cars, six full-length dome-lounge cars, and six dining cars. Each of the latter will seat 80 diners at upper-deck tables, while food, prepared in a kitchen on the lower level, will be transported to the dining room on elevators. Drawings show artists' conceptions of interiors of dome cars (left) and diners.**

gers in each chair car as compared with cars on the present "El Capitan." The new train will have a capacity in its seven chair cars of 496 passengers, compared with the present "El Capitan's" normal capacity of 350 persons in eight cars.

Doors are located at centers of all cars on both sides. Passengers entering chair cars will step directly in from platform level.

Luggage placed on shelves on the lower level will be unloaded at stations through separate openings in sides of cars, leaving vestibules clear to facilitate detraining and entraining of passengers.

**Dining Cars**—Upper levels of dining cars will be devoted entirely to table space for 80 diners, with a kitchen located on the lower deck from which food will be transported to the top level by two elevators. With all kitchen work confined to the lower level and all dining service on the upper, meals can be prepared more efficiently and in less time, while the dining room is expected to be quieter and more comfortable.

**Dome Cars**—Dome-type lounge cars, seating a total of 88 patrons on upper and lower decks, will have dome windows the full length of the car on the upper deck, with picture windows 56 in. wide on the lower deck. There will also be a newsstand, a refreshment bar and rest rooms.

The new train will be decorated throughout in colors of the Indian Southwest, and all cars will be equipped with a public address system carrying recorded music, radio programs and train announcements.

## C&NW Gets Its First Suburban Double Decker

The first of 16 new streamlined air-conditioned coaches of double-deck design for suburban service was delivered to the Chicago & North Western last week. Paul E. Feucht, C&NW president, said each of the new gallery cars will have seats for 169 persons, greatest capacity of any railroad equipment in the country.

The initial coach was placed on exhibit at the North Western's Madison Street station in Chicago March 30-31.

Designed basically to fit the needs of heavy suburban service, all the new C&NW cars will have such features as automatically controlled air-conditioning and heating. Car entrances are at the center rather than the ends, with each entrance wide enough to permit simultaneous passage by three persons. Sliding doors are remotely controlled.

The cars will have double-glazed windows at both levels, and entrance steps will be protected with radiant heating panels to prevent accumulation of ice and snow. The cars will be equipped with tight-lock couplers, rubber draft gear and roller bearing trucks.

Built by the St. Louis Car Company, the new cars are to be delivered at the rate of about one a week. They will be assigned to suburban service in Chicago. Total cost is approximately $2,240,000.

**INTERIOR of the new C&NW suburban cars features reversible seats upholstered in red vinyl plastic, green rubber tile floors, individual lighting and double-pane safety windows. Gallery seats on the second level are accessible from the center vestibule.**

# Traffic

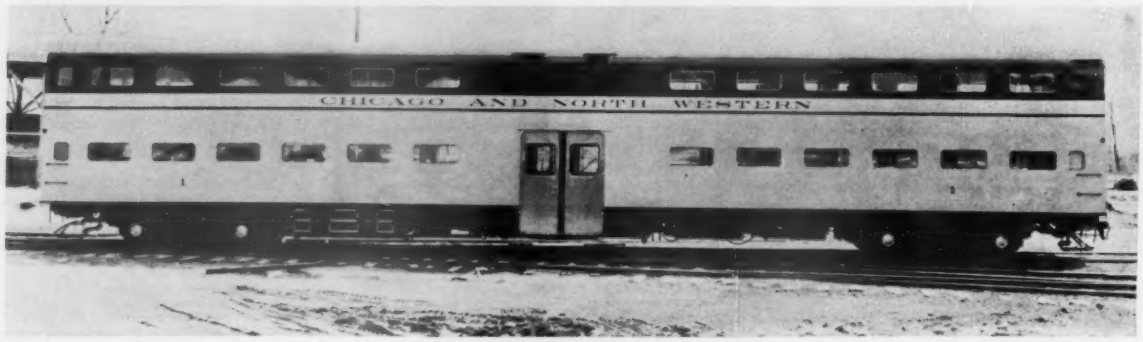
## Second Quarter Car Loadings Seen Up 7.1%

An increase of 7.1% in freight car loadings in the second quarter of this year, compared with the same period in 1954 has been predicted by the 13 regional Shippers Advisory Boards.

On the basis of the estimate, loadings of the 32 principal commodities will be 7,014,610 cars in the second quarter of 1955, compared with 6,547,109 actual loadings for the same commodities in the corresponding quarter of last year. Eleven of the 13 boards estimate increases and two estimate decreases in loadings.

The accompanying tabulation shows actual loadings for each district in the second quarter of 1954, estimated loadings for the second quarter of 1955, and percentages of changes.

The advisory boards expect an increase in the second quarter of 1955, compared with the same period one year ago, in the loading of 24, and a decrease in eight, of the commodity




**GALLERY CAR NO. 1, the first of 16 new double-deck coaches for suburban service, was delivered to the Chicago & North Western last week.**

| SHIPPERS ADVISORY BOARD | ACTUAL LOADINGS, SECOND QUARTER, 1954 | ESTIMATED LOADINGS, SECOND QUARTER, 1955 | PERCENTAGE CHANGE |
|---|---|---|---|
| New England | 103,799 | 102,983 | 0.8 dec. |
| Atlantic States | 635,710 | 686,926 | 8.1 inc. |
| Allegheny | 678,103 | 754,988 | 11.3 inc. |
| Ohio Valley | 750,643 | 812,820 | 8.3 inc. |
| Southeast | 966,084 | 976,133 | 1.04 inc. |
| Great Lakes | 524,091 | 618,295 | 18.0 inc. |
| Central Western | 190,792 | 208,447 | 9.3 inc. |
| Midwest | 758,565 | 811,200 | 6.9 inc. |
| Northwest | 535,275 | 579,607 | 8.3 inc. |
| Trans-Missouri-Kansas | 312,807 | 321,718 | 2.8 inc. |
| Southwest | 475,836 | 475,524 | 0.07 dec. |
| Pacific Coast | 358,053 | 392,280 | 9.6 inc. |
| Pacific Northwest | 257,351 | 273,689 | 6.3 inc. |
| Total | 6,547,109 | 7,014,610 | 7.1 inc. |

groups listed. Among those expected to show increases are: Automobiles and trucks, 33%; ore and concentrates, 20%; vehicle parts, 14.4% iron and steel, 11.5%; agricultural implements, and vehicles other than automobiles, 10.4%; coal and coke, 10.1%; cement, 7.1%; brick and clay products, 6.9%; lime and plaster, 6.9%; frozen foods, fruits and vegetables, 6.8%; metals other than iron and steel, 6.2%, and lumber and forest products, 5%.

Commodities for which decreases are estimated include: Hay, straw and alfalfa, 11.3%; cotton seed, soy beans—vegetable cake and meal, excluding oil, 10.5%; cotton, 8.4%; machinery and boilers, 4.7%; and potatoes 3.7%.

# Operations

## Elmira Area Gets Lackawanna Piggyback

The Lackawanna inaugurated trailer-on-flat-car ("piggyback") service, April 1, to and from the Elmira-Horseheads-Corning, N.Y., area and the New York-New Jersey metropolitan area, eastbound, and to Buffalo, Cleveland, Detroit, Chicago and St. Louis, westbound.

Truck trailers used in the new service, as well as the rail cars, are owned by the railroad.

Olean Transportation Lines will perform pick-up and delivery work for the Lackawanna in Elmira and Elmira Heights. Rodabaugh Transportation Lines will provide similar service in Horseheads, Big Flats, Corning and Painted Post. Rodabaugh ultimately will provide substituted lcl service between Elmira, Corning and Wayland.

## NYC Undertakes Traffic Flow Study

American railroads may be diffident, says Alfred E. Perlman, president of the New York Central, but they are not decadent, as uninformed critics sometimes suggest. In support of this theme he outlined to the New York Traffic Club, in a luncheon address on March 29, the large variety of technological advances already made or planned by the railroads, and particularly those currently in progress on the NYC.

As a basis for further improvements, Mr. Perlman said, the NYC has arranged for a cooperative study by Carnegie Institute of the traffic flow of the entire railroad. One major purpose of this study is to secure information by which to determine where major classification yards should be located. Studies are planned—and in some cases actually under way—of yard operations in cities served by the Central. At Youngstown, Ohio, for example, where the road now has five yards, consolidation of switching operations in one modern "push-button" yard is the objective. It is the hope of the road's management that operations at East Buffalo, where there are now seven NYC yards, can be centralized in one modern yard. This would eliminate the interyard switching which now is responsible for 28% of all switching movements at that point, he explained.

New York Central operating procedures and staff are going through a fundamental reorganization, Mr. Perlman observed, and important economies are being realized. As the result of a joint NYC-New Haven study, for example, the annual payroll at New York's Grand Central Terminal has been cut by about $1 million. All over the New York Central "economy" diesel fuel will soon be in use, with substantial savings in fuel bills.

Railroads can be prosperous, Mr. Perlman declared. In fact, in the West and South many roads are relatively prosperous now, but those in the East are having a rougher time adjusting to new conditions. The railroads must have a modern pricing structure, he insisted. For too long, he declared, they have been stand-by facilities for air lines and trucks.

## Long Island's 1st RDC Goes into Service

The first of two rail diesel cars ordered by the Long Island from the Budd Company went into experimental passenger service between Babylon and Southampton March 30. The new service began on schedule after the Brotherhood of Railroad Trainmen rescinded, pending mediation, previous orders to its members not to operate the Budd car without a flagman.

The 84-passenger RDC-2 left Babylon on its maiden run at 7 a.m. March 30, starting a new service that gives 10 stations on the Babylon-Southampton portion of the LI's Montauk branch eight extra trains a day—four in each direction. Stations at which stops are made were selected as representing communities with the greatest present and potential traffic. The number of stops was held down to offer the fastest possible run—one hr, 21 min—for the 52.7-mi trip.

Thomas M. Goodfellow, LI vice-president and general manager, said the new operation is "strictly experimental," and that continuation of the service, which supplements present operations, will depend on the extent to which it is used. "We'd like to be able to continue on a permanent basis what at the outset will be strictly an experiment," he emphasized.

New schedules designed to provide faster and more frequent service during non-rush hours will be inaugurated by the road late in April. Among basic aims of the new schedules are provision of service each half hour from Montauk to Babylon; addition of shuttle runs on the main line between Jamaica and Mineola; service each half hour to Arverne, Wavecrest and Far Rockaway; hourly service to Hempstead; and service each hour on the Port Jefferson branch, at least as far as Northport.

# Competitive Transport

## ICC Announces New Probe Of Riss & Co. Operations

Riss & Co., Kansas City trucker already under investigation for alleged traffic violations in Ohio and for possible improper use of a Canadian lodge, is the subject of a new probe, this time involving safety and explosives regulations.

The Interstate Commerce Commission announced the investigation March 25. It stated "there is reason to believe" that the trucker "has failed or is failing to comply" with regulations covering qualifications and maximum hours of service of employes, safety of operations and equipment and the transportation of explosives.

Noting that hearings will later be consolidated with the record in "Public Utilities Commission of Ohio v. Riss & Co." the commission warned that if the allegations are found to be true Riss' operating certificates may be suspended or revoked in the event the company fails to comply with ICC orders in the matter.

Ohio's charges against the trucker

were presented to the commission July 9, 1954 and amended as reported in *Railway Age*, February 21, page 14. The ICC's investigation of the Riss lodge raised the question of whether "rebates, concessions or discriminations" are involved (*Railway Age*, October 18, page 10). Riss sued 85 railroads for $90 million for allegedly conspiring against the company (*Railway Age*, September 27, 1954, page 7) but 23 roads then filed suit against Riss for $100 million as reported in the *Railway Age* of December 20, 1954, page 8.

# Figures of the Week

## Freight Car Loadings

Loadings of revenue freight in the week ended March 26 totaled 639,447 cars, the Association of American Railroads announced on March 31. This was a decrease of 16,670 cars, or 2.5%, compared with the previous week; an increase of 38,033 cars, or 6.3%, compared with the corresponding week last year; and a decrease of 75,886 cars, or 10.6%, compared with the equivalent 1953 week.

Loadings of revenue freight for the week ended March 19 totaled 656,117 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, March 19

| District | 1955 | 1954 | 1953 |
|---|---|---|---|
| Eastern | 120,687 | 108,692 | 128,454 |
| Allegheny | 131,431 | 113,130 | 147,434 |
| Pocahontas | 51,925 | 43,324 | 49,532 |
| Southern | 107,366 | 120,856 | 130,409 |
| Northwestern | 73,939 | 68,831 | 75,754 |
| Central Western | 113,404 | 100,949 | 110,997 |
| Southwestern | 57,345 | 54,177 | 58,485 |
| Total Western Districts | 244,708 | 223,957 | 245,236 |
| Total All Roads | 656,117 | 609,959 | 701,065 |
| Commodities: | | | |
| Grain and grain products | 43,867 | 41,159 | 43,082 |
| Livestock | 6,894 | 7,273 | 6,097 |
| Coal | 109,764 | 98,221 | 109,830 |
| Coke | 10,622 | 8,755 | 14,972 |
| Forest products | 41,458 | 39,241 | 44,658 |
| Ore | 17,356 | 14,888 | 19,687 |
| Merchandise l.c.l. | 62,683 | 65,156 | 72,197 |
| Miscellaneous | 363,473 | 335,266 | 390,542 |
| March 19 | 656,117 | 609,959 | 701,065 |
| March 12 | 666,548 | 609,937 | 700,183 |
| March 5 | 658,975 | 590,576 | 684,864 |
| February 26 | 635,453 | 595,031 | 668,654 |
| February 19 | 655,035 | 618,623 | 689,430 |
| Cumulative total 11 weeks | 7,081,497 | 6,761,723 | 7,604,497 |

**In Canada.**—Carloadings for the seven-day period ended March 14 totaled 67,845 cars, compared with 66,997 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

| | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|---|---|---|
| Totals for Canada: | | |
| March 7, 1955 | 66,997 | 32,212 |
| March 7, 1954 | 65,717 | 29,264 |
| March 14, 1955 | 67,845 | 31,871 |
| March 14, 1954 | 66,580 | 29,172 |
| Cumulative Totals | | |
| March 14, 1955 | 688,566 | 321,137 |
| March 14, 1954 | 671,339 | 294,107 |

# Law & Regulation

## Supreme Court Will Review New Haven Piggyback Case

The U.S. Supreme Court will review on a limited basis an appeal by the International Brotherhood of Teamsters of an injunction prohibiting a Boston local from interfering with the New Haven's piggyback operations.

The court will review the case on the question of whether the New Haven should have sought relief under the National Labor Relations Act rather than through Massachusetts courts. The road obtained a restraining order against the teamsters local in 1952 after union agents "persuaded" truck drivers not to deliver loaded trailers to the road for piggyback service (*Railway Age*, March 7, page 16).

The union claims that since the case involves a secondary boycott—its actions were directed against the truckers—the National Labor Relations Board had jurisdiction. The New Haven claims, however, that the NLRB could not have offered relief to the road and that therefore the courts were free to act.

## Cooperation Needed for Good Transport Policy

Constructive Congressional action on transportation policy depends upon cooperation by the transport industry, its users and investors, and the general public, Harold F. Hammond, executive vice-president of the Transportation Association of America told the Detroit Traffic Club March 24. "Of all these, the shipper is in the key spot to help produce the best results," he emphasized. "Operating from a neutral corner, the shipper is able to punch when and where it will be most effective."

With good teamwork, backed by strong shipper support, Mr. Hammond said, "we hope to see Congress adopt some constructive measures this year to help strengthen the regulated transport industry."

Mr. Hammond pointed out that continued growth of the American economy can be assured only if our transport system is maintained and strengthened under private ownership. To establish a more favorable climate for transportation, and particularly for the regulated portion of the industry, he said, the TAA is continuing to stress the program it recommended earlier this year (*Railway Age*, February 7, page 8).

## Antitrust Study Group Files Its Report

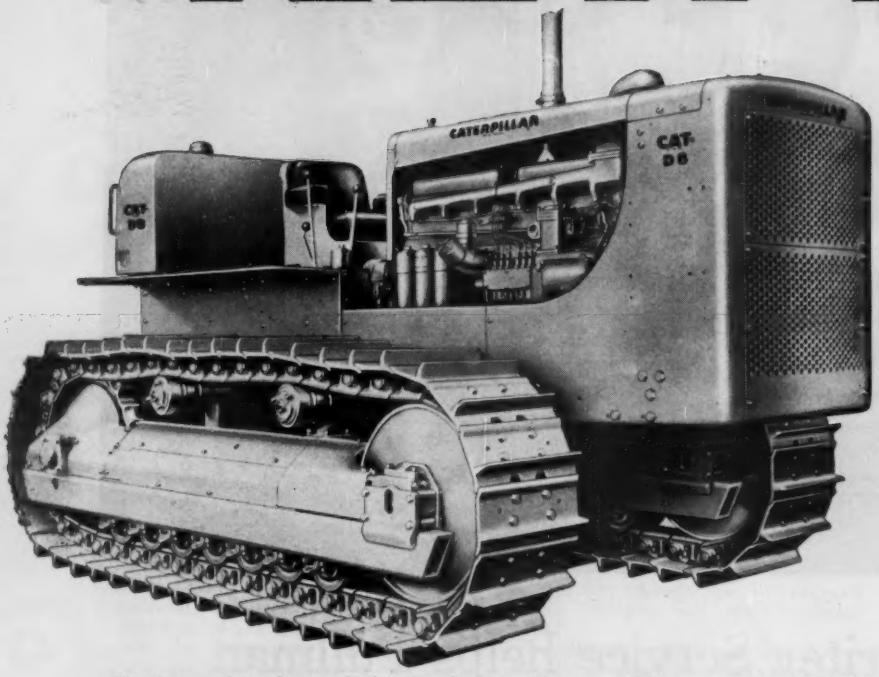
The Attorney General's National Committee to Study the Antitrust Laws has submitted a report which includes a discussion on the issues of agency (such as the Interstate Commerce Commission) jurisdiction.

The committee suggested that Congress conduct studies on the need for specific statutory outlines of where the agency role ends and that of the courts begins in antitrust cases which fall within either jurisdiction. Until such time, however, the committee suggested "broader and more formalized liaison procedures" between the Antitrust Division and the agencies. It recognized

(*Continued on page 15*)

**READING "PIGGYBACK" service, originally inaugurated January 1 between the Philadelphia-Camden, N.J., area and Chicago, was extended, effective March 28, to St. Louis-East St. Louis. The extended service, which will provide second-day delivery in both directions, is operated in conjunction with the Western Maryland, the Pittsburgh & West Virginia and the Nickel Plate. Freight is handled in railroad owned equipment under railroad bills of lading, at rates which are fully truck competitive.**

# CATERPILLAR ANNOUNCES THE NEW D8




## SERIES D and SERIES E

**Choice of torque converter (Series D) or direct drive (Series E)**

Here's a major advance in tractor design—the new CAT* D8 Series D and Series E. While it still bears the name of the unit that earned world-wide recognition as "boss of the crawlers," it is basically a *new* machine.

From its new 7-track roller track frame to its new engine, 155 HP at the drawbar and 191 HP at 1200 r.p.m., it is built to set new standards of money-making production. Along with its advance-design features, it retains such outstanding Caterpillar exclusives as the oil clutch and other job-proved developments. As a result, you can figure on it for *more* work at *lower* cost with *less* down time on *any* job.

Production-wise and profit-wise, you have a new yardstick of performance in the D8 Series D and Series E. For complete details, see your nearby Caterpillar Dealer.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

***NEW* ENGINE,** with new fuel injection system. Flanged center main bearing to take crankshaft thrust. Timing gear integral with crankshaft. Many other advantages.

***NEW* "LIVE-SHAFT" DRIVE,** independent of flywheel clutch, provides constant power for rear-mounted cable controls, etc., whether or not tractor is in gear.

***NEW* ONE-PIECE WELDED STEERING CLUTCH CASE**—main frame assembly for a stronger "backbone." Transmission removable without disturbing clutch.

***NEW* "EASY WORKING" CONTROLS** handy to comfortable, one-man seat. New streamlined hood for visibility.

***NEW* OPTIONAL DRIVE,** torque converter or direct drive. Torque multiplication of 5 to 1 gives smooth, efficient operation in each speed range.

***NEW* 7-ROLLER TRACK FRAME FOR GREATER STABILITY,** flotation and better ride.

***NEW* "WATER-QUENCHED" TRACK SHOES** for longer life than ever before.

***NEW* "IN SEAT" STARTING** for greater convenience, with new, more powerful starting engine for faster starts in any weather.

***NEW* HYDRAULIC BOOSTER STEERING,** independent of flywheel clutch, for maximum steering ease.

***NEW* 118-GALLON FUEL TANK,** large enough for normal 12-hour operation.

***NEW* ATTACHMENTS** include new cable controls. Also, new, larger bulldozer blades. All equipment used on the D8 can be used on the new D8 Series D and Series E.

***NEW*** operating weight—D8 Series E (direct drive), 40,430 lb.; Series D (torque converter), 41,265 lb.

*AND MANY OTHER NEW FEATURES!*

**CATERPILLAR***

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**MAIL TODAY!**

**CATERPILLAR TRACTOR CO., Peoria, Illinois, U. S. A.**

I'd like more information on the new D8 Series D and Series E

*Name*_____

*Company*_____

*Address*_____

*City*_____ *Zone*_____ *State*_____

**The NEW D8 Tractor —another example of CATERPILLAR LEADERSHIP in action**

# Teletypewriter Service helps Pullman play host to 50,000 guests

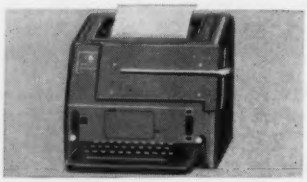
It takes real organization to play host to 50,000 travelers every night—and good *communications* are needed for this nationwide job.

The Pullman Company has found that Bell System service is the answer to its communications problems. From a Message Center in Chicago, a private line teletypewriter network reaches out over 9000 miles, affording direct contact with 57 outlying offices.

This puts speed into hundreds of routine chores. It enables Pullman to give the public smooth service—saves expense in transferring material, operating cars, restoring lost valuables. A tool gets to the shop quicker. A repair goes faster.

"More efficient management of our business is an advantage of the system," a Pullman official says "... in addition to being more economical."

Bell System services can help speed your communications, save you money. Just call your Bell telephone representative for more information.



**How messages are speeded**

- A 9000-mile nationwide teletypewriter hookup of 9 intercity circuits connects the Chicago Message Center with 57 stations in 46 cities.
- Chicago is the nerve center of the network. Circuits radiate to secondary relay centers in Philadelphia, Atlanta, St. Louis and San Francisco.
- Semi-automatic tape relay equipment is used to speed messages between switching centers and outlying stations.

BELL TELEPHONE SYSTEM

TELEPHONE MOBILE RADIO TELETYPEWRITER INTERCOMMUNICATION AND PAGING SYSTEMS TELEMETERING AND REMOTE CONTROL

## Law & Regulation

*(Continued from page 12)*
the agencies' commitments to the "public interest" but advocated Antitrust Division intervention before the agencies in order to present its views in cases where agency action may result in exemption from antitrust laws.

The committee passed "no judgment on the necessity of rate agreements by railway bureaus or airlines." However, it cautioned that "closer court scrutiny" may be advisable to the extent to which the different agencies interpret congressional standards relating to competition in "promoting the public interest."

The committee also considered the question of delivered prices which absorb transportation costs and recommended that "the law carefully differentiate between competitive and collusive delivered pricing." It indicated that where the prices are established in the course of free competition there was no serious objection.

### Competitors "Exert Great Political Pressure"—White

"Those who are benefited by keeping railroads in a straitjacket of monopolistic regulation and who fear loss of their artificial advantages are exerting great political pressure to retain their artificial advantages," William White, president of the Delaware & Hudson, told the Investment Association of New York on March 25.

That statement followed Mr. White's assertions that "it was heartening when the President appointed a Cabinet Committee on Transportation," but that "we have less reason to be heartened now because it is already evident that great conflicts are occurring within the Cabinet itself." "It is quite clear to me," the D&H president continued, "that it will take greater political courage than we are accustomed to for any Administration and any Congress to face the facts and do merely what is just and reasonable."

There is no need, in Mr. White's opinion, for "omnibus" revision of the Interstate Commerce Act, but "there are a few things that could be done that would help a lot." Specifically he advocated:

(1) Giving railroads a little more freedom in making rates and reducing the time lag in revising rates, while retaining minimum-rate provisions of the IC Act "to prevent cut-throat competition."

(2) Giving railroads the right of appeal to the ICC from adverse decisions or from "inaction" of state commissions with respect to passenger train abandonments.

(3) Narrowing limits under which transportation of agricultural commodities is exempt from motor carrier regulation.

(4) Repealing the long-and-short-haul clause.

(5) Giving railroads the right to engage, under proper regulatory procedure, in highway and air transport.

Given these "few things," plus "a user charge for commercial use of facilities provided with public monies," would enable railroads, said Mr. White, to "emerge from the unequal situation in which they now find themselves" and to "accelerate their forward progress, but not at the expense of other legitimate enterprise."

## In Congress

### Bills in Congress

Listed below are bills of interest to railroads which have been introduced in Congress since the latest previous listing in *Railway Age*, February 21, page 13.

**The strike** of non-operating employees on the Louisville & Nashville, the Nashville, Chattanooga & St. Louis and the Clinchfield prompted Senator Kefauver to introduce S.1481 and S.1482.

He made a statement saying his office had received a number of calls from persons who were "worried about trains being operated by personnel who are not specially trained." As to S.1482, the senator said it relates to the question of whether passengers and the general public would be protected "if there were no standard of safety for maintenance of railroad tracks, bridges, and related equipment."

**Introduced in Senate**—S.1168, to provide that the passenger-fare tax shall apply only if the fare exceeds $1 (Frear, Del.).

S.1192, to add to the Civil Aeronautics Act "agricultural exemptions" like those now included in the Motor Carrier Act (Magnuson, Wash., for himself and Kuchel, Cal.).

S.1251, to amend the Railroad Retirement Act to provide that the annuity of the widow of a deceased employee shall not be reduced on account of any benefit to which she may be entitled under the Social Security Act (Capehart, Ind.).

S.1377, to add an "anti-racketeering" provision to the Interstate Commerce Act's declaration of national transportation policy (Magnuson, Wash.).

S.1481, to authorize the ICC to prescribe minimum standards of training and experience for operating personnel of railroads (Kefauver, Tenn.).

S.1482, to authorize the ICC to prescribe minimum standards of safety for railroad tracks, bridges and related facilities (Kefauver, Tenn.).

S.1429, to amend the Interstate Commerce Act to require the establishment by motor carriers of reasonable through routes and joint rates (Ellender, La., by request).

**Introduced in House**—H.R.4301, to amend the Railroad Retirement Act (O'Konski, Wis.).

H.R.4305 and H.R.4306, to amend the Railroad Retirement Act to increase the amount of annuities payable thereunder, and to provide full annuities at age 60 for men who have completed 30 years of service, and at age 55 for women who have completed 25 years of service (Smith, Miss.).

H.R.4384, to require that one member of the ICC be from New England (Philbin, Mass.).

H.R.4555, to amend the Railroad Retirement Act to provide that survivors of certain deceased employees who had 30 years or more of service at the time of their deaths shall be entitled to survivor's benefits under the act (Bentley, Mich.).

H.R.4691, to amend the Hours of Service Act (Priest, Tenn., by request).

H.R. 4703, to require government agencies in charge of public works projects to assume the burden of proving that involved railroad abandonments or relocations would be in the public interest (Williams, Miss.).

H.R.4744, H.R.4828, H.R.4879, H.R.4906, H.R.4950, H.R.5039, to amend the Railroad Retirement and Railroad Unemployment Insurance acts (Priest, Tenn.; Wolverton, N.J.; Beamer, Ind.; Miller, Cal.; Withrow, Wis.; Roosevelt, Cal., respectively).

H.R.4831, to amend the Safety Appliance acts (Zelenko, N.Y.).

H.R. 5048, to exempt farm transportation from tax (Chenoweth, Colo.).

## New Facilities

### Electronic Reservation System for New Haven

An electronic system said to be capable of handling up to 1,000 space reservations per hour has been contracted for by the New Haven. It will be engineered and installed early in 1956 by the Teleregister Corporation, Stamford, Conn., a subsidiary of the Ogden Corporation.

Adoption of the so-called "Magnetronic Reservisor System," will, according to NH President Patrick B. McGinnis, "mean that prospective passengers can get split-second service on any type of reservation inquiry or sale. It will eliminate the possibility of certain types of human error that are bound to develop in a manual reservation system. And because it will provide up-to-the-minute central control, it will mean that we can do a more effective job of selling all types of available space." The new system is part of the five-year, $64,000,000 improvement program recently announced by the New Haven, Mr. McGinnis added (*Railway Age*, March 7, page 52).

When the "Reservisor" network is installed, passengers in New York, Boston, New Haven, Hartford and Providence will learn within seconds whether accommodations they desire on any specific date within a 31-day period are available. Ticket agents and telephone reservation clerks at those locations will get this information almost instantly from specially-designed push-button agent sets. If specific space requested is not available, the lighting of lamps on the keyset will not only disclose this fact but will indicate whether alternate space is available on the same or other trains.

**Heart** of the system is a magnetic

drum, to be located at Stamford, capable of storing data on availability, reservation and sale of approximately 100,000 individual space accommodations during the 31-day period. As space is reserved or sold, the inventory on the memory drum is changed accordingly by a central electronic computer. If a reservation is cancelled, re-availability of the space is recorded immediately on the drum and the accommodation becomes available for re-sale. If the cancellation involves space on a train for which there is a waiting list, the "Reservisor" routes this information to a special clerk who will assign the newly available space to the first passenger on the list.

"The network will be extended to other New Haven traffic centers as passenger volume increases," Mr. McGinnis said.

## US&S Demonstrates CTC for NY Subways

Possibility of centralized control of all trains on the entire IRT (Interborough Rapid Transit) division of the New York Transit Authority's subway system was indicated March 31, when the Union Switch & Signal Division of the Westinghouse Air Brake Company demonstrated to Transit Authority members a model of a machine designed for that purpose. The demonstration closely followed opening of the first section of a US&S-installed CTC system on the IRT's Flushing line.

The proposed CTC system, with the control machine located at a control center, would govern movement of trains at maximum speeds and minimum intervals to provide faster and better service. It would permit supervised automatic operation of the IRT with a complete picture of train movements on the entire system displayed before a "train movement director" at the control machine.

**The suggested machine** consists of a number of floor-mounted, vertical sections arranged in two semi-circles and set at different levels so the "train movement director" could observe the entire working area of each section. Essentially, the machine would provide for automatic train routing. Push buttons and levers, mounted on a miniature track model of the IRT system, would offer finger-tip control of the entire system. Indication lights would show the location and identity of every train on the line. If necessary, an operator could instantly change a routing simply by pushing one or more buttons. It is believed nine men would compose the maximum crew required to operate and supervise the machine.

The traffic control system would include a train identification and route controlling system which would automatically position switches, identify trains at the machine, and, by illuminated signs on station platforms, announce whether a train is local, express or super-express. A train communication system would provide voice communication between the control center and every train on the line, and with stations along the way.

**Operating Advantages**—The traffic control system is expected to offer the following operating advantages:

(1) Best handling of traffic with minimum train handling personnel.

(2) Establishment of "skip" stop services on local tracks, to provide faster and better service.

(3) More express and super-express services.

(4) An accurate system for supplying passengers with complete train information at stations, to decrease platform confusion.

(5) Movement of a maximum number of trains in an emergency.

(6) Single-track operation during night hours, to facilitate cleaning and maintenance.

**Anticipated economic benefits** include a saving in capital expenditure of approximately $12,000,000, based on an estimate that increased operating flexibility will increase utilization of rolling stock and permit operation of the IRT with approximately 100 fewer cars. Annual operating savings estimated at $3,000,000 would result from centralized operation, performance of the same service with fewer trains, and decrease in cost of maintenance of cars, roadway, structures and signals.

**CTC on Flushing Line**—The US&S CTC system on the IRT's Flushing line, also demonstrated March 31 by Col. Sydney H. Bingham, executive director and general manager of the Transit Authority, presently extends from Times Square, the control point, to Hunters Point Avenue station in Queens. When completed, the system will control all trains between Times Square and Main street, Flushing (*Railway Age*, March 15, 1954, page 70).

## Supply Trade

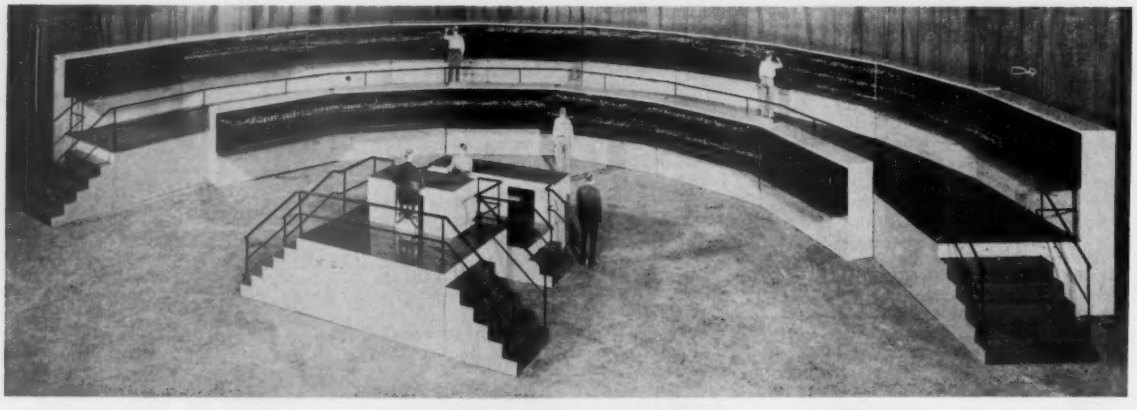
The **Matisa Equipment Corporation,** Chicago, has appointed as its east coast sales agent the **Railroad Materials Corporation,** 30 Church street, New York. The latter company is headed by **A. W. Boorom.**

**Robert B. Murray, Jr.,** who recently resigned as under secretary of commerce for transportation, to return to private business, has been appointed special assistant to the president of **Baldwin-Lima-Hamilton Corporation,** at Philadelphia.

**Rear Admiral Wilson D. Leggett, Jr.,** chief of the Navy's Bureau of Ships, became vice-president, engineering, of **American Locomotive Company,** upon his retirement from the Navy March 31.

An expansion program that will more than double facilities of the Gerrard Steel Strapping Division of **United States Steel Corporation** will be un-

(*Continued on page 54*)



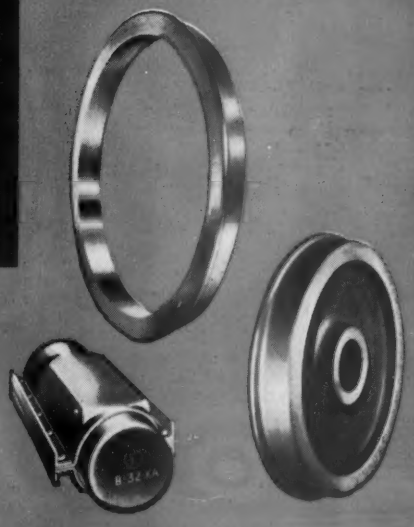
**A PROPOSED CTC MACHINE for controlling all train movements on the entire IRT division of the New York City subway system was demonstrated in model form—shown above—to members of the city's Transit Authority, city officials and press on March 31, by the Union Switch & Signal Division of Westinghouse Air Brake Company. CTC is now in use on one section of the IRT's Flushing line and is being extended to the whole of that line.**

Leading the Way—Regardless! By Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

**E Edgewater Steel Company**

PITTSBURGH, PA.



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ROLLED STEEL TIRES
with ROLLED STEEL WHEELS
AND DRAFT GEARS

# King Size

* **CAPACITY** of 19,200 gallons can divide *number* of deliveries in half . . . when transporting fuel oils or any liquids not under pressure.

* **QUALITY** follows acf traditions. Made to I.C.C. specifications 103-W. Rugged all-welded underframe. All-welded tank is X-rayed, stress relieved.

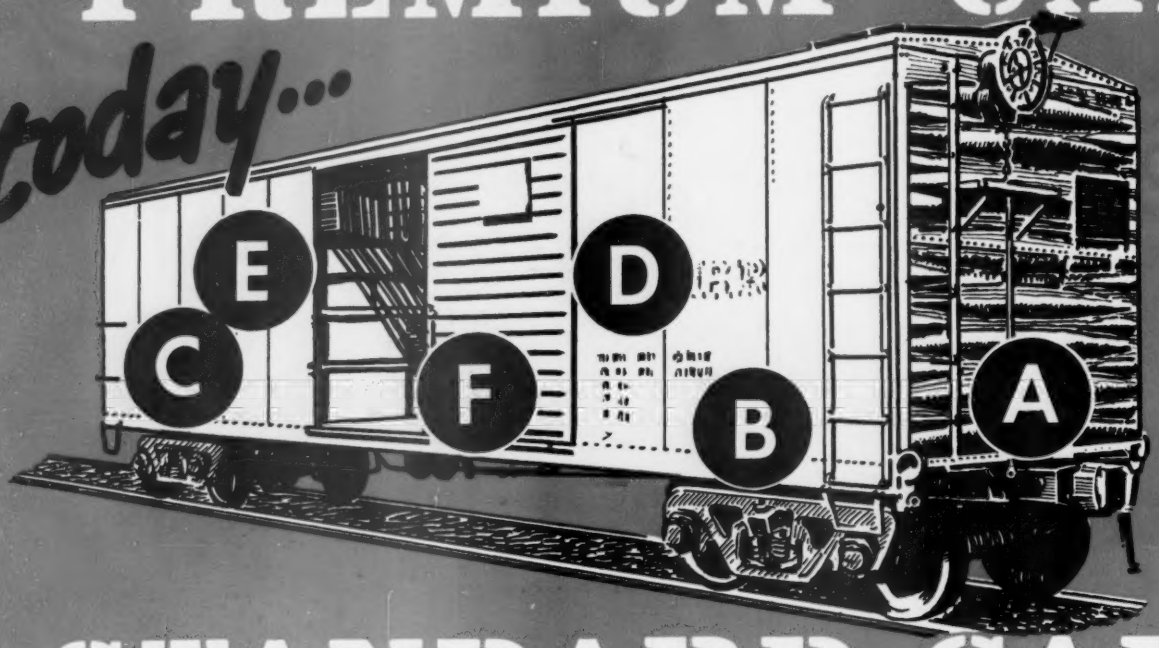
* **BENEFITS** from this unique combination of quantity and quality are currently being enjoyed by such railroads as the Union Pacific, Chicago Great Western (roller bearing equipped) and the Canadian Pacific.

* **ATTENTION** will be given promptly to your inquiries. A folder giving complete specifications is yours for the asking. acf Industries, Incorporated, New York • Chicago • St. Louis • Cleveland • Philadelphia • Washington • San Francisco.

acf **CAR BUILDERS TO AMERICA'S RAILROADS**

# 'PREMIUM' CAR

*today...*




# STANDARD CAR

*tomorrow!*

- **A** WAUGH CUSHION UNDERFRAME
- **B** IMPROVED TRUCKS
- **C** IMPROVED BEARINGS AND LUBRICATION
- **D** WIDE DOORS
- **E** LOAD RETAINERS
- **F** EXTRA HEAVY SURFACED FLOOR

## Car and lading protected, of course, by WAUGH *Cushion Underframe*

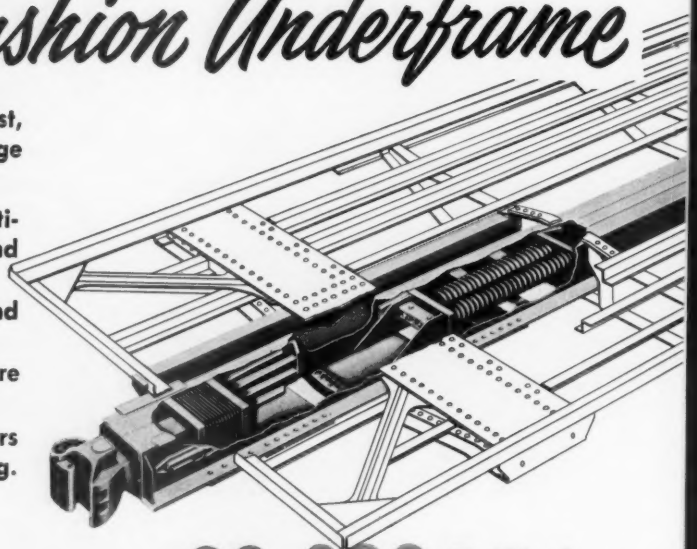
**SAFE HIGH SPEED.** No pull-out or run-in shocks means fast, safe freight movement without car damage or lading damage and fewer hot-boxes.

**LADING PROTECTION.** Minimum of longitudinal and vertical shocks to car structure and lading in fast classification and high speed operation.

**SHIPPER GOOD WILL.** Fast shipment of merchandise and safe arrival will bring premium traffic back to the rails.

**DURABILITY.** Protected against excessive shocks, cars require far less repair and remain serviceable years longer.

**AVAILABILITY.** Fewer cars on rip tracks mean more cars available when and where wanted . . . and more cars earning.



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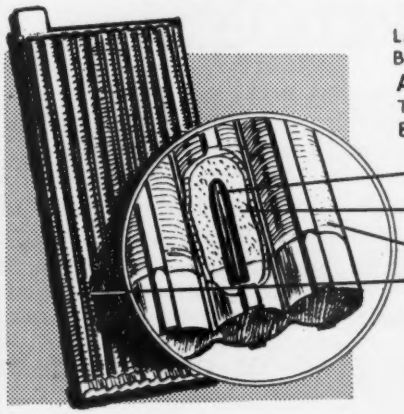
# FACTS ABOUT Exide®
## IRONCLAD® DIESEL STARTING BATTERIES

## FINGER TIP CONTROL OF 2000 HORSES WITH EXIDE-IRONCLADS

THEY SPIN 2000 H.P. DIESEL LOCOMOTIVE UNITS TO FIRING SPEED IN SECONDS. THE TREMENDOUS RESERVE POWER OF EXIDE IRONCLADS ASSURES NOT ONLY QUICK STARTING BUT ALSO THE POSITIVE OPERATION OF CONTROLS. IRONCLADS GIVE THE BEST BATTERY OPERATION WITH LOWEST COSTS BECAUSE OF EASY MAINTENANCE AND LONG SERVICE LIFE.

## BATTERIES ARE WORKED TO DEATH BY EXIDE ENGINEERS TO LEARN SECRETS OF LONGER LIFE

SINCE 1910, RESEARCHERS HAVE GREATLY IMPROVED EXIDE-IRONCLAD PERFORMANCE AND USEFUL WORKING LIFE, BUT THE BASIC IRONCLAD PRINCIPLE OF TUBULAR CONSTRUCTION REMAINS THE SAME.



PROTECTED CONDUCTING GRID
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IRONCLAD POSITIVE PLATE

LAB TESTS OF IRONCLADS AGAINST CONVENTIONAL TYPES OF BATTERIES SHOW THAT THEY GIVE BETTER PERFORMANCE... AND FROM 20% TO 30% LONGER LIFE! THESE TWO FACTS, DEMONSTRATED BY THOUSANDS OF BATTERY USERS, ARE THE REASON WHY...

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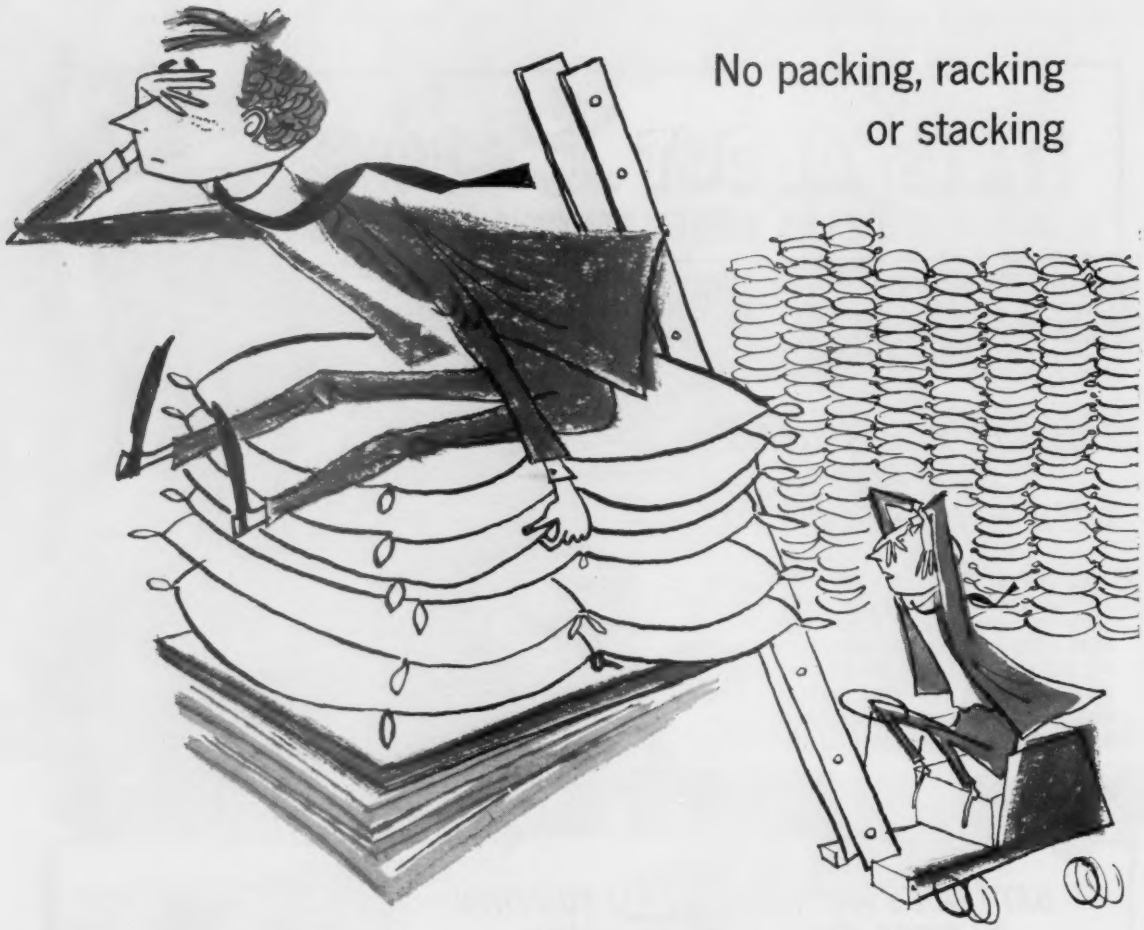
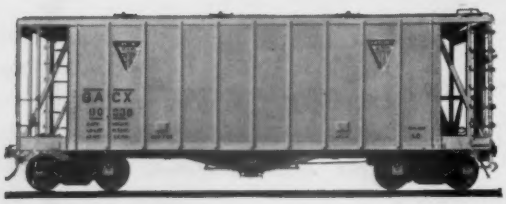
LET EXIDE HELP SOLVE YOUR DIESEL STARTING BATTERY PROBLEM ❶ CALL AN EXIDE SALES ENGINEER FOR FULL DETAILS. ❷ WRITE FOR FORM 4843-ALL ABOUT MAINTAINING AND INSTALLING DIESEL STARTING BATTERIES.

**Exide INDUSTRIAL DIVISION,** The Electric Storage Battery Company, Philadelphia 2, Pa.




# Bulk shipping of dry, granular and powdered products in General American Airslide® Cars is safer, easier—and costs less!



Over 600 Airslide Cars now in service or on order. A small blower is all you need to unload cars into any conveying system. Write for bulk shipping information on your products.

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**GENERAL AMERICAN TRANSPORTATION CORPORATION**

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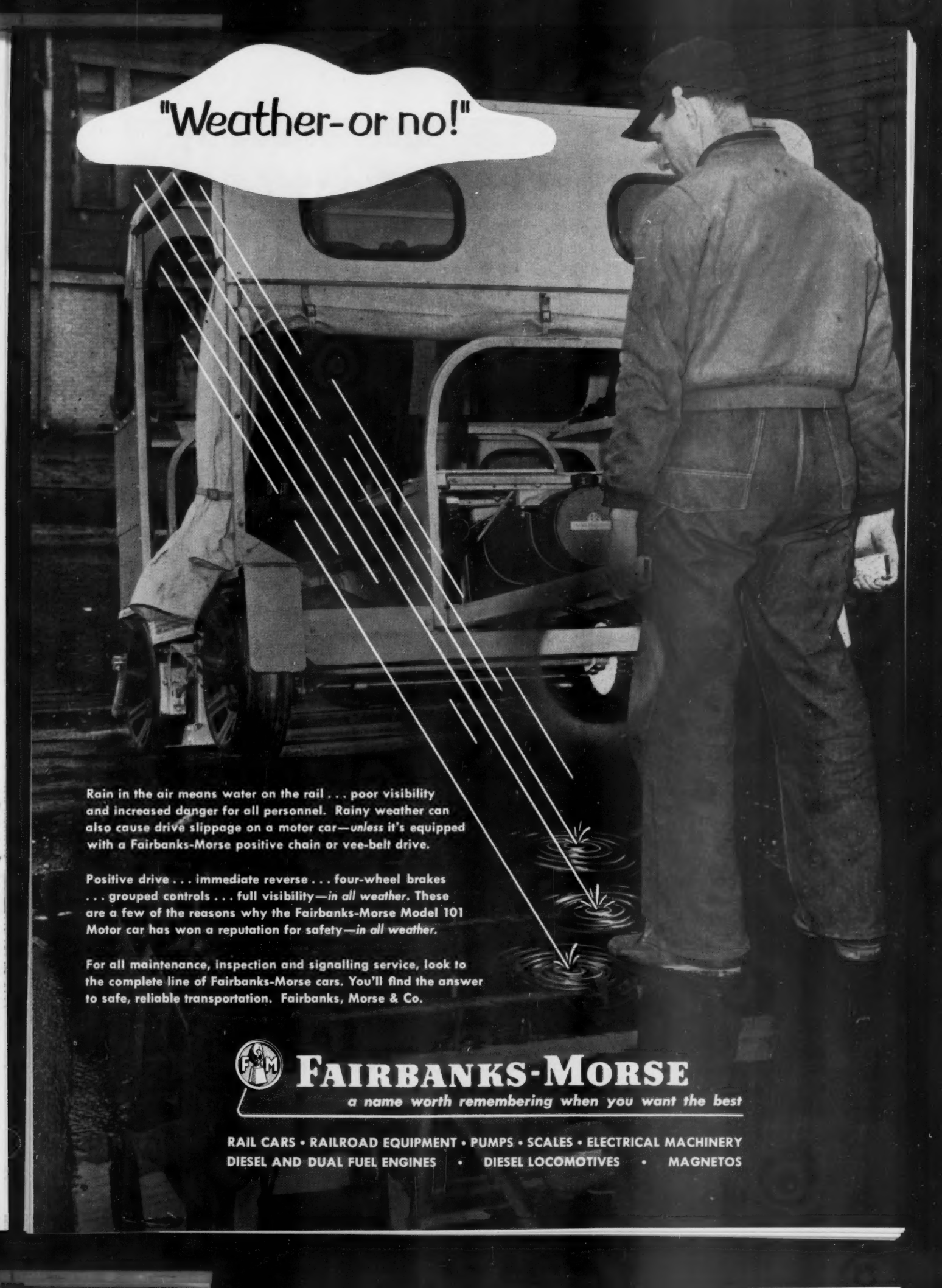
**Airslide cars now successfully shipping flour, semolina, sugar, starch, plastics, chemicals and other products**




Rain in the air means water on the rail . . . poor visibility and increased danger for all personnel. Rainy weather can also cause drive slippage on a motor car—*unless* it's equipped with a Fairbanks-Morse positive chain or vee-belt drive.

Positive drive . . . immediate reverse . . . four-wheel brakes . . . grouped controls . . . full visibility—*in all weather.* These are a few of the reasons why the Fairbanks-Morse Model 101 Motor car has won a reputation for safety—*in all weather.*

For all maintenance, inspection and signalling service, look to the complete line of Fairbanks-Morse cars. You'll find the answer to safe, reliable transportation. Fairbanks, Morse & Co.

**FAIRBANKS-MORSE**

*a name worth remembering when you want the best*

RAIL CARS • RAILROAD EQUIPMENT • PUMPS • SCALES • ELECTRICAL MACHINERY
DIESEL AND DUAL FUEL ENGINES • DIESEL LOCOMOTIVES • MAGNETOS

# Simtex assures superior quality by testing at every step

The Uster Linear Integrator electronically measuring uniformity. At seven different stages in the process of turning raw cotton into weaving yarn, Simtex operators return the cotton to this machine for spot checks on size and uniformity.

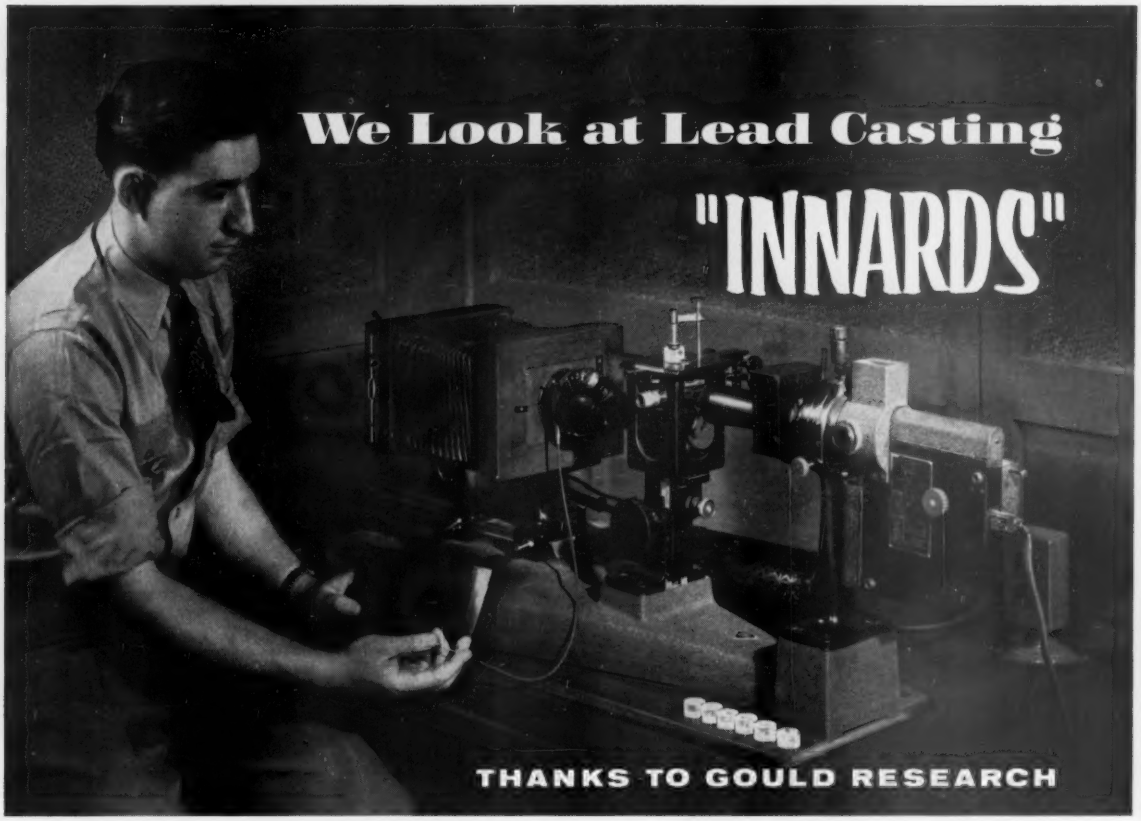
Nineteen separate tests are used in the Simtex Quality Control program—the most thorough system ever devised in the tablecloth industry for assuring uniform quality. Typical Simtex procedures are the exacting tests to determine length, fineness, thickness of cotton fibers—and the laboratory fiber-breaking tests for strength, used before blending, repeated before weaving, and again applied to the tablecloth in both greige and finished state. To you, Simtex scrupulous testing assures:

> Lustre that lasts—texture that *stays* luxurious—a hand that remains fine and crisp through *countless launderings* and endless *use*. Cloth for cloth, Simtex outlives all other napery. Simtex *predictable wear-life* lets you budget your replacements in advance: Simtex quality pays off in economy.

It's smart housekeeping to specify Simtex napery—with your own distinctive crest, if you wish. *You can always count on Simtex quality.*

Simtex **Mills,** Division of Simmons Co.,
Empire State Bldg., New York 1, N.Y.

**ALL COTTON IS CARDED — ONLY THE BEST IS COMBED**




## TO GIVE YOU PREDICTABLE

# BATTERY PERFORMANCE

Only by looking at its "innards" can the life expectancy of a lead casting be determined. The Metalloscope in Gould's research laboratory enables Gould engineers to do just that.

A combination high-powered microscope and camera, the Metalloscope provides highly magnified photographs of metallic crystalline structures. It played an important part in developing the amazingly strong, long-life Gould Grids.

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GOULD-NATIONAL BATTERIES, INC.
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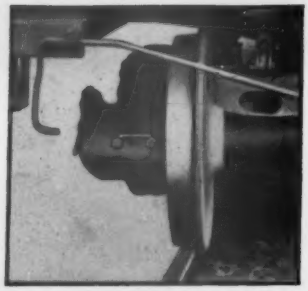
*Always Use Gould-National Automobile and Truck Batteries*

# Here's how Magnus improve freight



100 50'-6" Frisco box cars like the above are equipped with R-S Journal Stops. Inset shows end view of truck and hex-head bolts that secure the stops. Frisco box cars, series 7000 to 7099, were equipped with R-S Journal Stops as a result of extensive tests on 9 additional cars that established improved performance and maintenance savings.

Journal box with R-S Journal Stops after flat switching impact at 11½ mph. Packing is still in proper position. Compare with photos at right.

**This CAN'T HAPPEN when you use R-S Journal Stops**

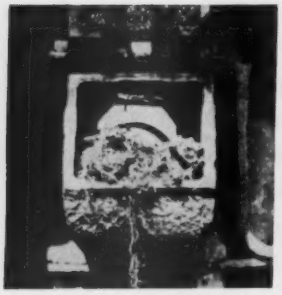
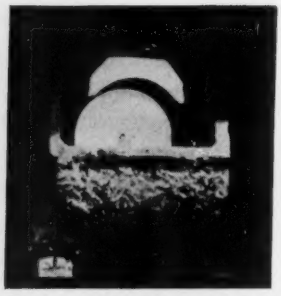


Photo of journal box at impact of 6 mph, showing how bearing is cocked off journal and packing is displaced.



When air and hand brakes are both applied, bearing and entire box are raised, compressing packing.

**MAGNUS METAL CORPORATION**

# R-S JOURNAL STOPS
# car performance

*Three years service on the Frisco proves that this new development greatly reduces hot boxes, improves journal bearing lubrication, and cuts truck maintenance costs all along the line.*

With MAGNUS R-S Journal Stops you can virtually eliminate hot boxes due to waste grabs. The bulk waste is always held firmly in position, and the bearing just can't be unseated to trap lint or short strands beneath the bearing crown. Because there's no packing displacement, oilers can service cars faster, too.

And because you hold the journal in its proper position, spread linings are prevented — and you get far longer bearing life. On the Frisco's first test car, *in 38 months there hasn't been a bearing replacement* — much less a hot box!

### Improved Bearing Lubrication

R-S Journal Stops will make for constant bearing lubrication, too. Impacts or braking can't force the journal out of position — can't force the box to rise and compress packing. Without journal stops, whenever you have impacts or heavy brake applications, not only is the packing knocked out of position, it's squeezed against the underside of the journal. Then there's a definite loss in packing-to-journal pressures, a definite loss in lubricating ability of the packing.

But with journal stops, you avoid all that. Within given limits you maintain constant journal-packing pressures, and you supply a constant feed of oil to the bearing.

### Many Other Maintenance Savings

To date all indications point to reduced and more uniform wheel flange wear when cars are equipped with R-S Journal Stops. But that's not all. You eliminate crushed dust guards and false brake piston travel. The prospects are for reduced center pin wear and a lower mortality rate for coil springs. That's why R-S Journal Stops can be used to real advantage with pad or mechanical lubricators or packing "containers." In fact, regardless of the lubricating method, R-S Journal Stops cut maintenance costs all along the line.

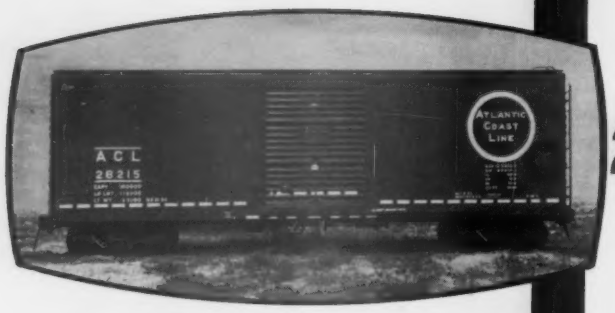
### Easy Installation

You can apply R-S Journal Stops to any standard freight car journal box — either separable or integral-cast type. Installation is simply a matter of drilling two holes in each side of the box, inserting and bolting stops and shimming to proper journal clearance. Bearing and wedge can be taken out for inspection without removing the stops. To change side frames, you just remove one stop from each box.

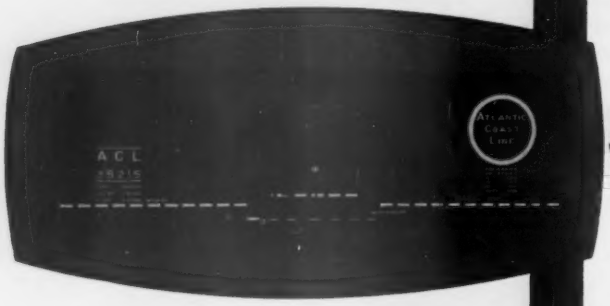
Write us today for complete information. Magnus Metal Corporation, 111 Broadway, New York 6, N. Y. or 80 E. Jackson Blvd., Chicago 4.

**MAGNUS**
**Solid Bearings**

*Subsidiary of* **NATIONAL LEAD COMPANY**




# 5 GOOD REASONS FOR REFLECTORIZING YOUR ROLLING STOCK with PRISMO




## 1 SAFETY AT YOUR GRADE CROSSINGS

Reflectorize with gleaming Prismo. Apply all-weather, all-hour visibility to your rolling stock, markers and signs . . . make them safer by letting them be seen . . . overcome the serious problem of nighttime grade-crossing accidents!

## 2 A MOVING BILLBOARD ADVERTISING YOUR ROAD

Don't let the darkness hide your identification! Let the name of your road and your slogans be seen "after hours" by applying a coat of glittering Prismo. Tremendous attention value to your name gleaming along in the night.

## 3 REDUCED INSURANCE RATES

Automobiles running into the sides of rolling stock, at night, accounted for 32% of all railroad accidents in 1948-51 . . . have caused a sharp increase in insurance rates. Apply highly-visible Prismo, increases safety at crossings, reduces your insurance rates!

## 4 QUICKER IDENTIFICATION IN THE YARD

When your rolling stock is marked with shining Prismo there's no trouble making identification at the "hump". The brilliant gleam of Prismo reflects car number, etc. from long distances in all kinds of weather.

## 5 LOWER PRICED REFLECTORIZATION

Prismo saves you 75% on reflectorizing costs! Prismo is easy and inexpensive to apply and lasts years and years without peeling. Wears so well that it will outlive four coats of ordinary marking material. Prismo is the BEST for long-lasting, low-cost reflectorizing.

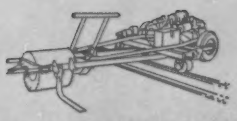
# PRISMO REFLECTIVE RAILWAY MARKINGS

1328

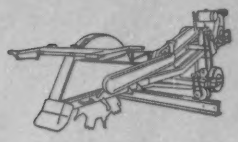
*For complete information, send today for your free copy of Bulletin #R-754.*

PRISMO SAFETY CORPORATION • HUNTINGDON, PENNA.

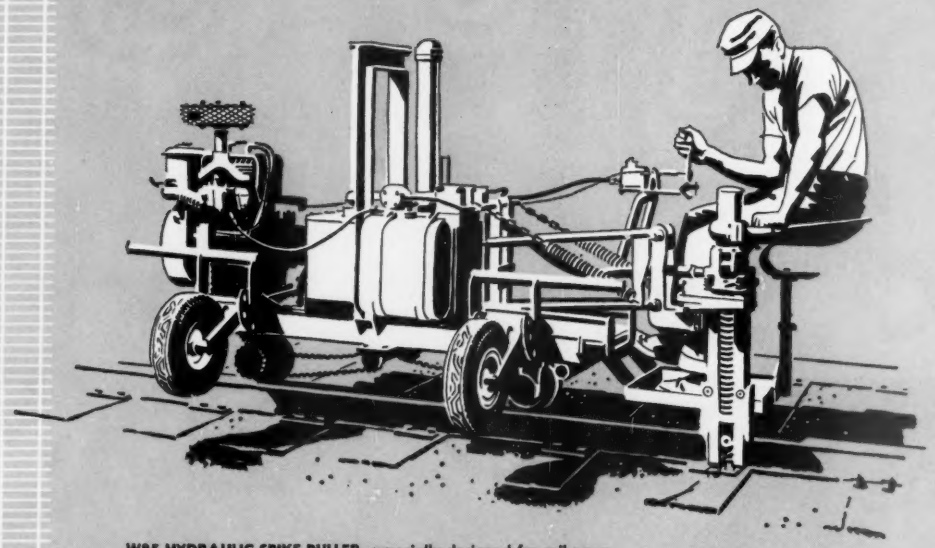
# IS YOUR PROBLEM rail renewal?



**W88 SERIES A TIE BRUSH** cleans tie area under and adjacent to the tie plate. Hydraulically propelled, it is well suited to gang use ahead of adzers and for cleaning prior to applying plastic base to tie plates.



**W89 SERIES A CRIB REDUCER** digs out crib that might foul the teeth of adzer. Digging drive includes fluid coupling, multiple V belts and speed reducer. Adjustable counterbalance and 2-way drive. One-man operation.



**W85 HYDRAULIC SPIKE PULLER,** especially designed for rail gang use, is self-propelled forward and reverse. Made to work in pairs. One-man operation. Capacity of from 20 to 25 spikes per minute.

**W79 SERIES A SPIKE SETTER CARRIAGE** makes spike setting unusually easy and economical. Large, convenient spike hopper; perfectly placed working seat; double-flanged rail wheels; two-rail, two-way operation.

**W71 SERIES A TIE SPRAYER** applies protective coating to newly adzed surfaces quickly and thoroughly. One-man operation. Automatic spray. Average consumption only 25 gallons of preservative per mile of single rail.

## You'll find the answer at Fairmont

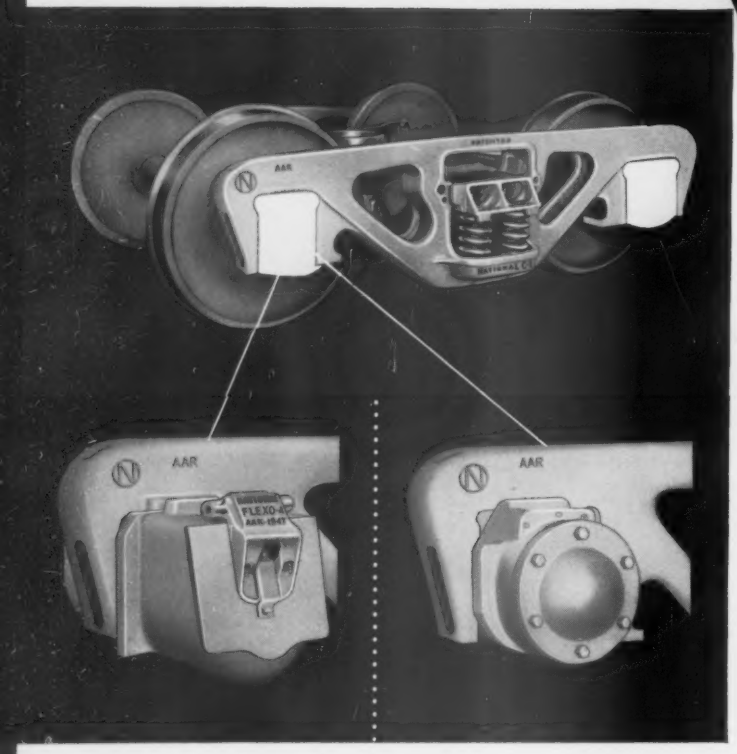
There is excellent reason why the industry has come to regard Fairmont as its first source for railway maintenance-of-way equipment. For it has become increasingly apparent through the years, that, regardless of the maintenance problem at hand, there is a Fairmont product that provides the perfect answer. As pictorial evidence of this fact, we have portrayed on this page a representative selection of the many and varied products that Fairmont manufactures for the single task of rail renewal. Each of these pieces of equipment embodies all of the qualities for which the Fairmont name is so justly famous—excellence of design, soundness of construction, thoroughness of work, and dependability of operation. Each is the product of years of research—and of the most intense application of practical experience to maintenance design and engineering. If rail renewal is your problem—we hope that you will study these various Fairmont products and contact us for further information. You can be confident that you will find the answer at Fairmont!

**FAIRMONT RAILWAY MOTORS, INC., FAIRMONT, MINNESOTA**

MANUFACTURERS OF INSPECTION, SECTION AND GANG CARS, HY-RAIL CARS, MOTOR CAR ENGINES, PUSH CARS AND TRAILERS, WHEELS, AXLES AND BEARINGS, BALLAST MAINTENANCE CARS, DERRICK CARS, OIL SPRAY CARS, GROUTING OUTFITS, TIE RENEWAL EQUIPMENT, RAIL RENEWAL EQUIPMENT, WEED CONTROL EQUIPMENT.

# MEMO

***To those contemplating future purchase of roller bearing freight trucks***




Should you be considering roller-bearing freight trucks but feel the investment cannot be made at this time—the National C-1 truck with "jaw-construction" may be the answer to your dilemma. Here's why:

You can order new cars *now*, equipped with C-1 trucks and National Journal Boxes with jig-ground lid faces. Then when you upgrade your cars to roller bearings in the future, these solid-bearing boxes can be replaced with new roller assemblies.

Meantime you get all the superior riding qualities of National C-1 trucks . . . all the extra protection to equipment and lading . . . all the extra-low maintenance because friction wedges in C-1 trucks have full-width bearing in side frame pockets.

Think of tomorrow *today*—and spread your investment in modern roller-freight trucks with jaw-construction National C-1 trucks.

Circular 5654 "Facts About the C-1 Truck" available on request. AA-998

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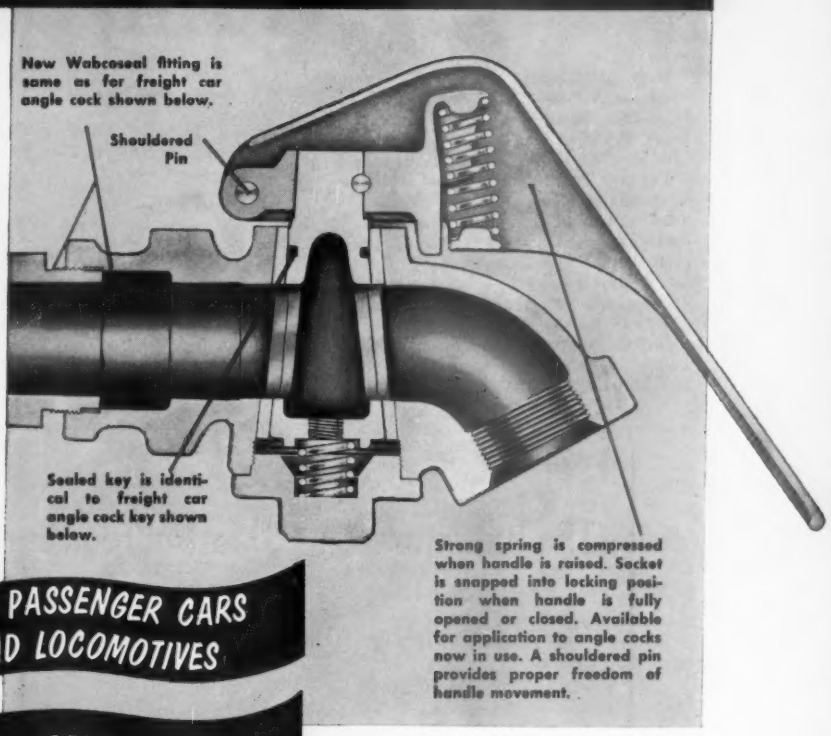
# New WABCOSEAL® Angle Cock

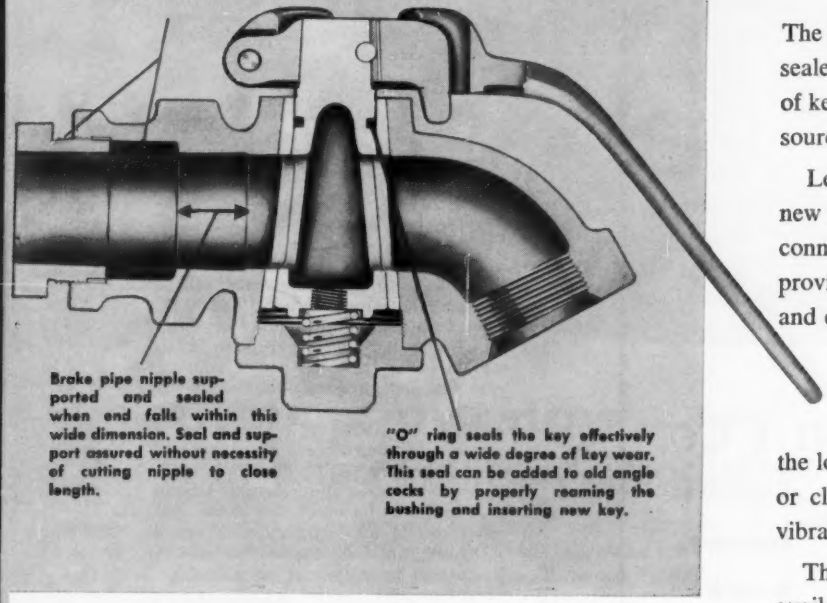
# Stops air leakage

**At brake pipe nipple and top of key**


New Wabcoseal fitting is same as for freight car angle cock shown below.
Shouldered Pin
Sealed key is identical to freight car angle cock key shown below.
Strong spring is compressed when handle is raised. Socket is snapped into locking position when handle is fully opened or closed. Available for application to angle cocks now in use. A shouldered pin provides proper freedom of handle movement.

FOR PASSENGER CARS AND LOCOMOTIVES

FOR FREIGHT CARS


Wabco compression ring grips pipe when nut is tightened to provide air-tight seal and strong clamping action.
Brake pipe nipple supported and sealed when end falls within this wide dimension. Seal and support assured without necessity of cutting nipple to close length.
"O" ring seals the key effectively through a wide degree of key wear. This seal can be added to old angle cocks by properly reaming the bushing and inserting new key.

The heart of the new Wabcoseal Angle Cock is the sealed key that stays tight through a wide degree of key wear. This eliminates one of the two major sources of air leakage in angle cocks.

Leakage at the other source is prevented by a new Wabco compression ring at the brake pipe connection which eliminates tapped threads to provide an air-tight seal with increased strength and end tolerance for the brake pipe nipple.

For passenger cars and locomotives the Wabcoseal Angle Cock has a spring-locking handle that snaps the socket into the locked position when the handle is fully open or closed and keeps it there despite shock and vibration.

The sealed key and spring locking handle are available separately for application to angle cocks in service. See your Westinghouse Air Brake representative for more information.

Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION WILMERDING, PENNA.

## Current Publications

### BOOKS

**STEEL STRUCTURES PAINTING MANUAL, 2 volumes. Volume II, SYSTEMS AND SPECIFICATIONS. Edited by Dr. Joseph Bigos. 300 pages. Steel Structures Painting Council, 4400 Fifth ave., Pittsburgh 13, Pa. $6.**

Volume 2 contains very specific recommendations on painting a tremendous variety of steel structures and surfaces in various exposures. Complete guides and indexes make it easy for engineers, architects, fabricators, and maintenance supervisors to specify complete paint jobs for new work or maintenance painting. In addition to guides and indexes of recommended painting schemes, Volume 2 includes complete specifications for surface preparation, pretreatment, paint application, paints, and paint systems. Now, it is possible to specify the painting of a steel structure in the same easy, precise method as the steel itself is specified—by reference to a specification number.

Volume I, Good Painting Practice, was reviewed in *Railway Age*, February 22, 1954, page 44.

•

**TALBOT'S RAILWAY TRANSITION SPIRAL, revised and enlarged by Edward H. Roth. 83 pages. J. P. Bell Company, 816 Main st., Lynchburg, Va. $5.**

The railway transition spiral or easement curve herein presented is a flexible curve of general applicability and of comparatively easy analysis. Conceptions and methods used are similar to those of ordinary circular railroad curves. This railway transition spiral has been widely used on railroads of the United States, and is recognized in principle by the American Railway Engineering Association in its current manual. In Part One, Mr. Roth has revised, to meet present railroad requirements, the work of the late Dr. Arthur N. Talbot, published in field book size in 1899, 1901, and 1927, by the McGraw-Hill Book Company. Part Two contains the tables for transition spiral.

•

**ILLINOIS TRACTION SYSTEM. 82 pages. Bulletin 98, Central Electric Railfans Association, Box 503, Chicago 90. $6.**

A picture history of the predecessor traction companies that comprise the present Illinois Terminal Railroad. The Illinois Traction system was one of the most highly-developed interurban electric roads in the country. For years it offered such travel refinements as parlor cars, dining service and section and bedroom sleeping cars (complete with upper berth windows). Although the company hoped to complete a through freight and passenger system between Chicago and St. Louis, its ambition was never completely realized and many of its properties have since been abandoned. The bulletin is profusely illustrated with equipment photographs, maps, timetables, etc.

•

**ENGINEERS' JOB DIRECTORY, 36 pages. Decision, Inc., 105 E. Fourth st., Cincinnati 2, Ohio. $2.25.**

This directory is designed to help many of the nation's outstanding companies put their "story" before graduating engineers. The 129 participating companies include Alcoa; American Steel & Wire division, U. S. Steel Corporation; Babcock & Wilcox Co.; Continental Can Company; Goodyear Tire & Rubber Co.; IBM; Minneapolis-Honeywell Regulator Company; National Cash Register Company; Pittsburgh Plate Glass Company; and RCA. They cooperated in presenting key facts in capsule form, giving precise information about their company, industry, year founded, products, number of employees and whom to contact. The guide also includes an index section in which companies indicate types of engineers they want. The index also lists plant, sales, and research laboratory locations by cities and states. Another section lists companies interested in undergraduates for summer jobs.

### PAMPHLETS

**RAILWAY OPERATING AND SIGNALLING TECHNIQUES IN EUROPE, JAPAN AND THE UNITED STATES OF AMERICA. 109 pages, illustrations. United Nations Publication, Sales**

*(Continued on page 34)*

*Why is*

**The Baltimore and Ohio Railroad**

***"a road with a future"?***

*Do you know—*

- Why its long-term revenue trend is favorable?
- How its operating efficiency is being increased?
- How its debt structure is being improved?
- What the prospects are for higher dividends?
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"Old Maud," the first Mallet-type locomotive built in the United States, was placed in service by B&O in 1904. She had a single huge boiler which powered two sets of drivers turning independently of each other. These permitted her to develop a tractive effort of 71,500 and negotiate mountain curves with heavy payloads.

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ESSO Hot Box Compound
AROX—pneumatic tool lube
CYLESSO—valve oil
ESSO Journal box compound
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Photo courtesy of Southern Railway System


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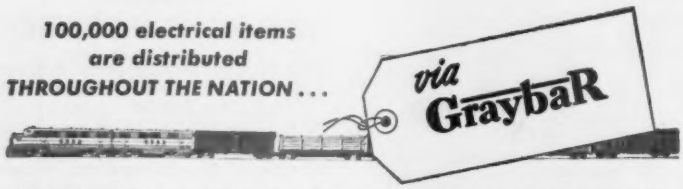
***100,000 electrical items are distributed THROUGHOUT THE NATION . . .***

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## Current Publications

*(Continued from page 32)*

**No.: 1953, VIII. 3. International Documents Service, Columbia University Press, 2960 Broadway, New York 27. $1.25.**

This is the report of the expert working group from Asia and the Far East on railway operating and signaling, which, under sponsorship of the United Nations Technical Assistance Administration and the Economic Commission for Asia and the Far East, toured Europe, Japan and the United States from October 2, 1952, until February 6, 1953. It covers railway operating and signaling systems, telecommunication, and terminals.

•

**PRICE LIST AND INDEX . . . AMERICAN STANDARDS . . . SPRING 1955. 48 pages. American Standards Association, 70 E.45th st. New York 17. Free.**

Lists and indexes about 1,500 American Standards.

•

**THE HUNDREDTH YEAR, 1953-54. 13 pages, illustrations. Victorian Railways, Public Relations and Betterment Board, Melbourne, Victoria, Australia.**

Reviews operations in 1953-54.

### PERIODICAL

**PANAMA CANAL REVIEW, Centennial Edition, January 28, 1955. Balboa Heights, Canal Zone. Single copies, 5¢.**

Issued to commemorate the centennial of the Panama Railroad, this copy of the Review covers both the past and present of the road. It contains a number of interesting old photographs depicting the building of the road, its equipment, terminals, etc.

### FILM

**CHALLENGE FOR TOMORROW. 16-mm., 25-min, sound, color. Available free through Santa Fe Film Bureau, 80 East Jackson blvd., Chicago 4.**

This film outgrew its original purpose. It was conceived as a safety film, and while it does carry an effective accident-prevention message, it is such an excellent portrayal of the human side of a modern railroad that it has been released for showing to outside groups. The script was written by E. L. Dugan, system safety superintendent, and production was carried out by Harold Kite Productions, Inc., under Mr. Dugan's direction. Because of its informal, fast-moving style, the film is suitable for showing to groups of children as well as to adults.

### ANNUAL

**BUS FACTS; A summary of Facts and Figures on the Motor Bus Industry. 23rd edition, 1954. 68 pages. National Association of Motor Bus Operators, 839 17th st., N.W., Washington 6, D.C. Free.**

# For Maximum Revenue and Greater Availability!

## Pulpwood Cars For the Progressive FRISCO Feature Cast Steel Underframes and Ends

The St. Louis-San Francisco Railway and other progressive railroads of America have built hundreds of pulpwood cars with COMMONWEALTH Cast Steel One-Piece Underframes and Upright Ends.

This type pulpwood car has many advantages over converted or other designs of cars. It provides maximum strength at minimum weight, assures longer life, greater availability and maintenance-free service. The one-piece cast steel underframe and upright ends simplify car construction.

These cars—especially designed for maximum revenue loads—are in service on a number of railroads and have proved a most profitable investment.

*Commonwealth One-Piece Cast Steel Pulpwood Car Underframe with Interlocking End Posts applied.*

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# Rolling Steel Doors

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If you want real protection, long life, and convenient, timesaving operation, you can't beat the quick action of a good power operated rolling Steel Door. No other type of door can match their compactness in operation . . . the vertical roll-up action of the door curtain occupies no usable space either inside or outside the opening—and, there are no overhead tracks or other obstructions to interfere with material stacking or crane handling adjacent to door openings. A quick-opening, quick-closing Mahon Power Operated Rolling Steel Door will save valuable space and valuable time in any type of opening. In addition, Mahon Rolling Steel Doors are permanent—their all-metal construction assures a lifetime of trouble-free service, and provides maximum protection against intrusion and fire. They require less maintenance, too, because, when the door is open, the interlocking steel curtain is rolled up above the opening safe from damage. When you select a Rolling Steel Door, check specifications carefully . . . you will find extra-value features in Mahon doors—for instance, the galvanized steel material, from which the interlocking curtain slats are rolled, is BONDERIZED and DIP-COATED with synthetic enamel which is baked on at 350° F. prior to roll-forming. You will find other Mahon features in both design and materials that add up to a greater over-all dollar value. See Sweet's Files for complete information, or write for Mahon Catalog G-55.

**THE R. C. MAHON COMPANY**

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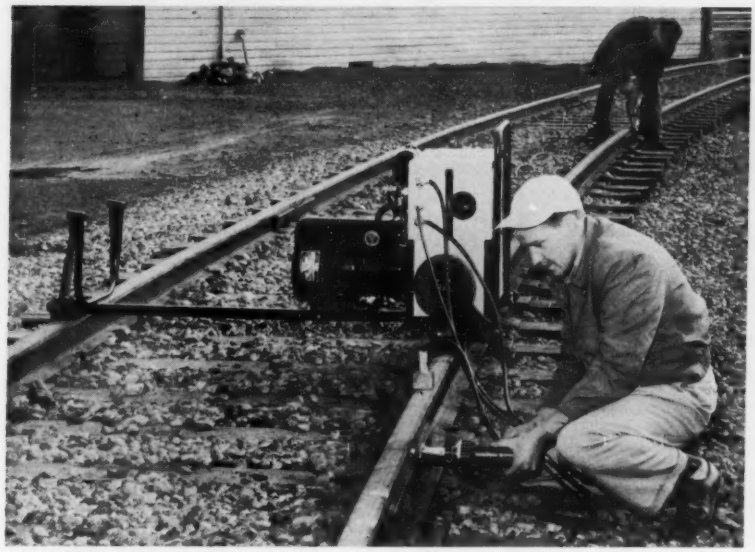
Manufacturers of Rolling Steel Doors, Grilles, and Automatic Closing Underwriters' Labeled Rolling Steel Doors and Fire Shutters; Insulated Metal Walls and Wall Panels; Steel Deck for Roofs, Partitions ,and Permanent Concrete Floor Forms.

ROLLING STEEL DOORS, SHUTTERS AND GRILLES TO MEET EVERY REQUIREMENT

Six Mahon Power Operated Rolling Steel Doors installed in truck openings of a loading dock in the new plant of Sutherland Paper Co., Kalamazoo, Mich. Miller-Davis Company, Designers and General Contractors. A total of thirty-nine Mahon Rolling Steel Doors were installed in various types of openings in this plant.

# MAHON

# What's New in Products



### *Brazed Signal Bond*

Tigerbraze is a new bond and method of applying it which have been developed by U. S. Steel's American Steel & Wire Division; the Nelson Stud Welding Division of Gregory Industries, Inc., Lorain, Ohio; and AGA (Svenska Ab Gasccumulator), Stockholm, Sweden.

The rail bond designed for this new process consists of the 7-in. AS&W harddrawn stranded bronze cable with a copper lug at each end. In applying the bond, a special Nelson knock-off rail bond pin and ceramic ferrule are used. The pin consists of a silver solder portion with a small cavity that contains the brazing flux, and the steel portion to which the silver solder cap is applied. The pin is notched just above the silver solder cap, permitting it to be broken off after the lug is brazed to the rail. The ferrules, or cone-shaped ceramic collars, developed by Nelson, are used to shield the arc from the atmosphere, and cause the heat to be concentrated on the braze area.

The special gun, developed by Nelson, delivers a controlled electric arc which is said to generate sufficient heat to form a braze in one second. When the gun trigger is depressed, causing the braze current (200 amp at 36 volts) to be struck, it flashes off the tip of the solder portion, allowing the flux to cleanse the braze area.

The duration and temperature of the arc are enough only to melt the silver solder. When the brazing current ceases, the steel pin is automatically plunged into the molten pool of silver solder by the gun pushing the solder underneath the copper lug. The combination of both silver solder and electric arc enables the connection to be made very quickly so that the harddrawn bronze strands and rail are not adversely affected.

The electrical supply of the arc comes from a small gasoline engine generator and batteries, mounted on a light-weight cart which has steel wheels to ride along on the rails, and also retractable rubber-tired wheels so that a man can trundle the car on or off the track easily. *American Steel & Wire Division, United States Steel Company, Cleveland* •

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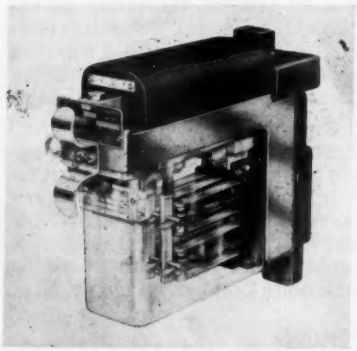


### *Plug-in Relay*

A new trunnionless, biased-neutral plug-in relay has railway signaling applications. This new, more economical, Union Style PN-150 relay has 6F-6B dependent low voltage contacts. Basically, the new relay is similar to the PN-50B relay and can be used interchangeably in the circuit applications where a maximum of 6F-6B contacts is adequate.

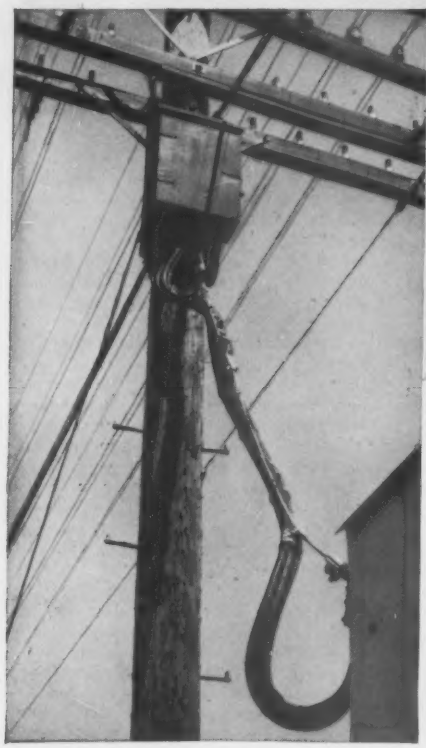
The comparatively small relay is 2 7/16 in. wide and 7 1/16 in. high, and requires only 60 per cent of the wall space needed for the PN-50B relay.

A new, self-contained, spring operated latch, which locks the relay to its mounting base, is a novel feature. The new relay can be applied and locked merely by pushing it into position. The PN-150 relay is said to meet the biasing features of the AAR Signal Section Specification 228-47. Biasing is achieved by the use of a permanent magnet which also provides a magnetic hold-down force on the armature when the relay is in the de-energized position. The magnetic hold-down force in most cases eliminates the need for shock absorbers in the event vibration is present.

A new, improved indexing system is provided so that a base will receive only a relay of a given reference. The relay is shipped with its indexing pins installed and accompanied by its associated indexing plate. The indexing plate is installed to the mounting base and secured by two studs. If it becomes necessary later to change the mounting base indexing to accept a different reference relay, the indexing plate may be removed from the mounting base and the proper plate applied. This new indexing system virtually eliminates the possibility of error due to improper selection of a replacement relay. *Union Switch & Signal Division of Westinghouse Air Brake Company, Swissvale, Pa.* •

On the Feather River Route of the Western Pacific.

These Okonite-Okoprene Signal Cables installed on Western Pacific right-of-way are continuously exposed to weather extremes.



# WESTERN PACIFIC selects OKONITE SIGNAL CABLES for all-weather dependability

The Western Pacific Railroad, in company with over 100 Class I railroads, relies on Okonite-Okoprene cables for dependable, all-weather service on their signal systems. On the San Francisco-Stockton Division, Western Pacific uses Okonite-Okoprene multiple conductor signal cables as laterals from track to signals. This is another example of the vital jobs capably handled by Okonite cables in railroad service.

Okonite insulation, made of natural Up-River Fine Para Rubber, has proved itself in service for over 75 years. It is always vulcanized in a continuous metal mold to assure a uniform cure. Perfect centering of the conductor is assured by the strip-insulating process. Okoprene, an exclusive Okonite neoprene formulation, protects the cable against weather extremes, alkalies, moisture and acids, as well as mechanical damage and most oils.

Okonite cables have proved themselves in service under the most difficult operating conditions for every important railroad use. Write for Bulletin RP- 1078 for information on Okonite cables for railroad use to The Okonite Company, Passaic, N. J.

*Available with either copper or aluminum conductors*

OKONITE SINCE 1878 *insulated cables*

2628

# How to Bring on A War and Lose It

Russia is far stronger industrially, compared to this country, than most Americans have been led to believe. Victory has come in the past two world wars from deploying this country's industrial strength in the production and delivery of the sinews of war. Since our industrial production is continuing to grow all the time—then what have we to worry about? Such is the comforting faith of the incurious.

The actual facts are much less reassuring. In the current issue of the Harvard Business Review, a leading authority on the Soviet Union, Philip E. Mosely, points out that, while Russia is now producing only about half as much steel as the U.S.A., it is *"probably putting an equal quantity of steel into military industry and perhaps somewhat larger amounts into military end products."*

Moreover, Russia's rate of industrial growth is probably about 6 per cent—as compared to only 3 per cent in this country. In Russia upwards of 20 per cent of the national income is going into capital investment—almost twice the rate of such investment in the U.S. Also, Mr. Mosely believes that more "scientists, engineers and technicians are being trained in the Soviet Union than in the United States." He goes on to say that "the Bolsheviks have shown what can be accomplished in a backward country, rich in raw materials and manpower . . . under the ruthless drive of communist dictatorship."

Exactly. If dictatorships prove that they can deal more realistically with facts than our easier-going Western governments, then what side is likely to be the victor in the event of a show-down? The great world issue seems to be taking this form: *Can the governments depending on popular votes be as factual as the dictatorships in dealing with the factors on which survival depends?* If the popularly governed countries are going to spend a large proportion of their substance on luxuries and waste, while the dictatorships pour all their resources beyond bare subsistance into war potential, then who's probably going to come out on top?

In his most illuminating new book* Walter Lippman expresses his concern at the declining ability of popularly chosen governments to take the firm action that realism requires. He goes on to say that "mass opinion has acquired mounting power in this century. It has shown itself to be a dangerous master of decisions when the stakes are life and death." Popular opinion, he observes, imposed a harsh peace on the beaten Germans after World War I—the kind of terms which eventually led to the rise of Hitlerism. Meantime, the same popular opinon in the Western democracies—which had been too belligerent to make a wise peace—became so pacifist that it was incapable of the military preparedness which might have forestalled the second world war.

Successful political leaders in the free world, says Lippmann, are "intimidated men." They hold their jobs only by their ability to deal with the pressure groups which go to work on them—and the real bosses are the skilled manipulators of public opinion.

For instance, can anyone imagine that the rulers in the Kremlin would be so stupid as to command or tolerate the wasteful policies regarding transportation which have been pursued in this highly enlightened country? The relative economy of fuel and manpower, rail *versus* highway, being what it is, would the Kremlin authorities parallel an efficient railroad with a long-haul, heavy-duty highway? Would they then proceed to make movement by rail artificially more expensive than it is naturally—and highway movement artificially lower in price than its actual costs—all with the calculated purpose of driving traffic from the more economical agency to the less economical?

The people who rule in the Kremlin have in mind enforcing their "way of life" on the rest of the world, and there's nobody in their country interfering with their pursuit of this ambition. But the political leaders of this nation—and the others of the free world—are not similarly permitted to defend and advance our much more humane way of life. Instead, *our* political leaders, to stay in office, have to subordinate their zeal for national strength to the importunities of the most powerful pressure groups. With our form of government and the present state of popular opinion, our elected leaders cannot be much more effective in serving the true public interest than the best organized pressure groups will permit them to be.

For the safety of their own hides, if from no loftier motive, the manipulators of public opinion ought to lighten their pressures on our government leaders, and encourage them to make better use of our labor power and our capital resources. Waste spells weakness and weakness invites attack, and the risk of defeat.

*"The Public Philosophy."

THE "OLYMPIAN HIAWATHA," pulled by a rebuilt gearless locomotive, leaving Seattle, Wash.

# Electrification Gets "Vitamins"

## The Milwaukee's electric traction system which began operation in 1915 is meeting the best competition diesels can offer

By L. WYLIE
Electrical Engineer
Chicago, Milwaukee, St. Paul & Pacific
and A. G. OEHLER
Electrical Editor, *Railway Age*

Railroad electrification, generally considered since the advent of the diesel-electric locomotive to be economically feasible only under conditions of extremely heavy traffic, is paying its way on the Milwaukee.

By stepping up trolley distribution system voltage, improving power conversion substation equipment and arranging its automatic control, providing modern facilities for maintenance and repair of electric locomotives, overhauling electric locomotives, purchase of 12 heavy-duty, high-speed locomotives, securing a reduction in the rate paid for electric power, and by making other improvements, the Milwaukee is keeping its electrification, in spite of age and relatively light traffic, in pace with the diesels in efficiency and economy.

This situation has been possible because, while most of the electrification equipment has now reached or exceeded the assumed life, the actual condition of the equipment is such as to meet satisfactorily the greatly increased present-day demands for speed and power. This has been accomplished by changes and improvements in equipment and in operation listed here.

**1.** Trolley voltage has been raised from 3,000 to 3,400 volts at substations to compensate for voltage drop in the trolley distribution system. This increase was obtained by inserting soft iron shims under the main field poles of the d-c generators to reduce the air gap from 3/8 in. to 3/16 in., thereby increasing the flux density of these synchronous speed machines. Some additional shunt field excitation of the generators is also required. The increase in trolley voltage has materially increased locomotive output without increasing electrical troubles on the line, locomotives or substations.

**2.** Substation equipment has been rehabilitated and some manually operated substations have been converted to automatic operation.

**3.** Adequate shop facilities have been provided for maintenance of electric locomotives.

**4.** Troublesome spring cushion driving gears have been replaced with solid gears on 80 locomotive units. This change has improved locomotive performance, decreased the cost of traction motor maintenance and reduced the cost of maintaining the gear drives to a fraction of the former cost. Present electric locomotive maintenance costs are less than the maintenance costs of diesel-electric locomotives in the same service over any extended period of time.

**5.** Electric locomotives have been thoroughly overhauled for the first time. Some have been operated for 35 years, and have rolled up individual mileages of about two million miles.

**6.** Power line maintenance methods have been improved at the same time reducing the cost of line maintenance.

**7.** By using more horsepower per train, a great increase in both train tonnage and average train speed has resulted.

**8.** Revision of power contracts has secured a flat rate

of approximately ½ cent per kw-hr. Power paid for by the railroad company is metered at substations at 2,300 volts.

A diesel-electric locomotive will develop approximately 10 kw-hr from one gallon of fuel oil—thus, if the cost of fuel is 10 cents per gallon, power cost for the electric locomotives, when line and conversion costs are included, is less than the cost of fuel would be for diesels (see Table 1).

As a result of these changes and improvements, the two electrified sections, 440 and 220 miles of line, respectively, are meeting stepped up operating requirements at a cost which justifies the continuation of electric operation.

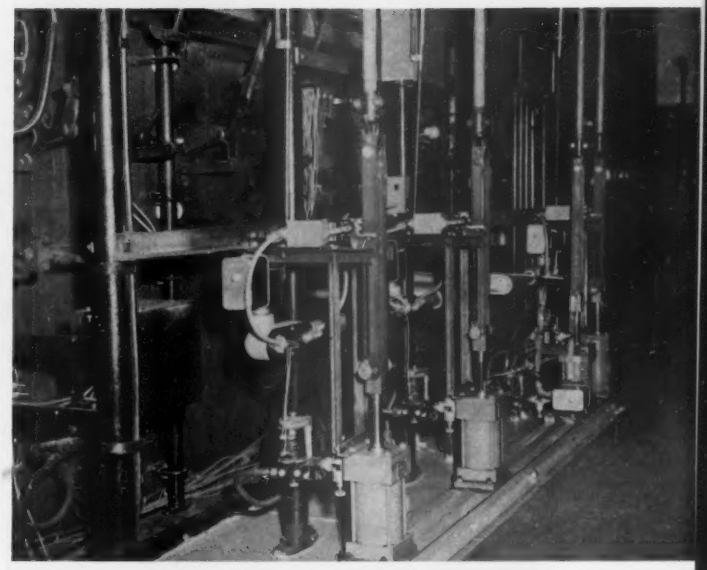
### *Transmission and Distribution Performance*

At least 90 per cent of the original 40,000 poles and 60 per cent of the original cross arms and attachments in the transmission line and distribution system are still in place. All poles have been stubbed with pressure-treated creosoted fir stubs, and all original wooden guy anchors have been replaced with reinforced concrete anchors.

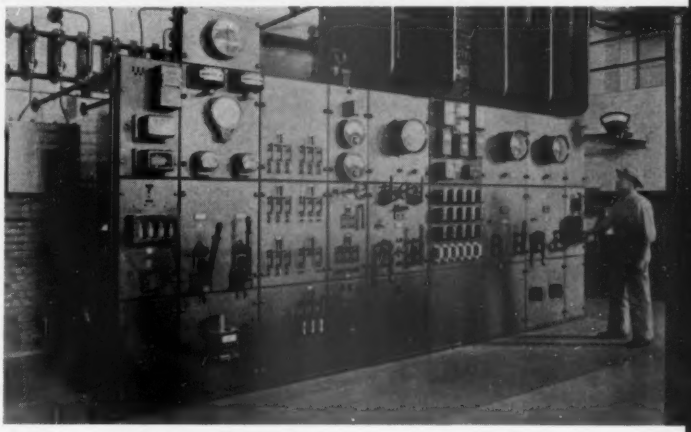
A considerable amount of corrosion of the trolley overhead has been experienced in all yards where steam locomotives previously operated, as well as from the summit of the Cascade range to Seattle and Tacoma. In this territory non-corrosive material has been installed where most needed. The rate of corrosion is being reduced as the use of steam locomotives is discontinued and as more non-corrosive material is applied. The original diameter of the 4-0 grooved copper contact wire was 0.482 in. The average diameter of this contact wire after 35 years of service is now approximately .430 in.

Contact wire is not removed from the line because of wear until it is reduced to a diameter of .360 in. By careful attention to pantograph maintenance and lubrication of trolley wire and pantograph shoes, the life of the contact wire can apparently be extended indefinitely.

Many improvements in line maintenance methods have been developed, the latest of these being the highway-rail tower car truck. It may be run on the highway to any rail-highway crossing, where the retractive flange



**SUBSTATION machinery is started, put on the line, taken off the line, and stopped automatically by electropneumatic operating mechanisms applied to the original breakers and switches.**



**MANUAL switchboard in the Cle Elum, Wash., substation.**

## TABLE 1—COST PER 1,000 GROSS TON-MILES FOR ELECTRIC POWER AND ELECTRIC LOCOMOTIVE MAINTENANCE

FREIGHT TRAIN OPERATION ROCKY MOUNTAIN AND COAST DIVISIONS

| *STATISTICS* | *1947* | *1948* | *1949* | *1950* | *1951* | *1952* | *1953* |
|---|---|---|---|---|---|---|---|
| Thousands GTM | 3,296,459 | 3,354,933 | 3,193,389 | 3,520,283 | 3,416,041 | 3,363,201 | 3,159,959 |
| KWH per MGTM | 36.9 | 37.6 | 37.1 | 37.7 | 39.9 | 40.0 | 39.0 |
| *Cost per KWH* | | | | | | | |
| Electric Power | $.006422 | $.006392 | $.006435 | $.005940 | $.005470 | $.005390 | $.005380 |
| Substation—Operation | .001600 | .001660 | .001837 | .001832 | .001819 | .001950 | .002020 |
| Substation—Maintenance | .000511 | .000389 | .000411 | .000398 | .000590 | .000543 | .000695 |
| Power Line—Maintenance | .000914 | .000933 | .001147 | .000833 | .000945 | .001186 | .001184 |
| TOTAL | $.009447 | $.009374 | $.009830 | $.009003 | $.008824 | $.009069 | $.009279 |

A HIGHWAY-RAIL line maintenance car on the track.

A MAINTENANCE car leaves the highway for the rails.

MOTOR-GENERATOR sets in the substation convert 2,300-volt, 3-phase a-c power to 3,400 volts d-c.

wheels are lowered by hydraulic cylinders so the truck can run to the work point on the rails. Practically all types of line maintenance work may be performed with this truck. The work tower, or ladder, is made of treated spruce which has excellent insulation properties so that it may be used for "hot" work.

### *Substations Modernized*

Of the 46 100,000/2,300-volt power transformers in substations, only 8 have been damaged to such an extent that new coils and complete overhauling were required. Most of the 46 synchronous, motor-driven generating sets have had minor repairs, but only about 25 per cent of these machines have been completely rewound.

There are 22 power-conversion substations, each of which was originally manually operated by three men, working three shifts. Three of these substations have been made automatic, and a number of the remaining stations will be converted to automatic operation.

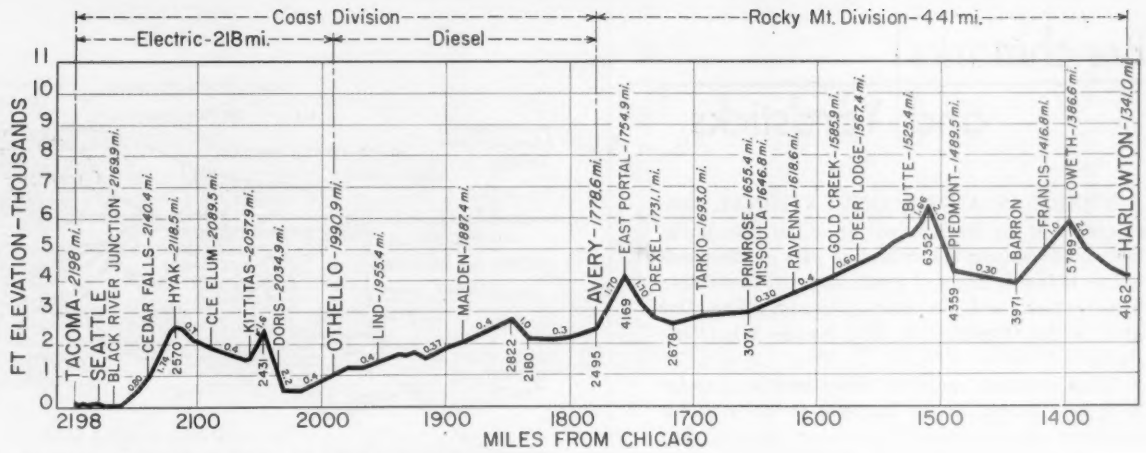
This conversion is accomplished by use of relay-controlled electropneumatic mechanisms applied to existing

## TABLE 2—AVERAGE PERFORMANCE OF 20 HEAVY TONNAGE TRAINS, ROCKY MOUNTAIN DIVISION

HANDLED BY CLASS EF-4 LOCOMOTIVES, SEPTEMBER 1953, HARLOWTON, MONT. TO AVERY, IDAHO

| | Distance | Number of | | Total | Terminal | Time Between Terminals | Road | Running | Miles |
|---|---|---|---|---|---|---|---|---|---|
| *Train No. 263* | *Miles* | Trains | Tons | Time* *Hr Min* | Delay *Hr Min* | *Hr Min* | Delay *Hr Min* | Time *Hr Min* | per Hour |
| Harlowton—Three Forks | 114.2 | 20 | 3,418 | 5-38 | 1-12 | 4-26 | 0-51 | 3-35 | 31.9 |
| Three Forks—Deer Lodge | 112.1 | 20 | 3,452 | 6-09 | 0-53 | 5-16 | 1-14 | 4-02 | 27.8 |
| Deer Lodge—Alberton | 110.8 | 20 | 3,553 | 5-47 | 2-55 | 2-52 | 0-10 | 2-42 | 41.0 |
| Alberton—Avery | 100.3 | 20 | 3,519 | 4-54 | 0-36 | 4-18 | 0-33 | 3-45 | 26.7 |
| Harlowton to Avery | 437.4 | 20 | 3,486 | 22-28 | 5-36 | 16-52 | 2-48 | 14-4 | 31.1 |
| *Train No. 264* | | | | | | | | | |
| Avery—Alberton | 100.3 | 20 | 5,715 | 7-23 | 2- 1 | 5-22 | 0-53 | 4-29 | 22.4 |
| Alberton—Deer Lodge | 110.8 | 20 | 5,783 | 5-22 | 0-47 | 4-35 | 0-35 | 3-52 | 28.6 |
| Deer Lodge—Three Forks | 112.1 | 20 | 5,295 | 8-28 | 2-37 | 5-51 | 1-13 | 4-38 | 24.2 |
| Three Forks—Harlowton | 114.2 | 20 | 5,492 | 7-12 | 1-51 | 5-21 | 0-49 | 4-32 | 25.2 |
| Avery to Harlowton | 437.4 | 20 | 5,571 | 28-25 | 7-16 | 21-09 | 3-38 | 3-38 | 25.0 |

*Time of arrival at one terminal to arrival at next terminal.




**PROFILE of the Milwaukee's electrified sections.**

switches and circuit breakers, and actuated either locally or by remote control. If desired, these mehcanisms can be operated by relays adjusted to respond to the contact system voltage at the substation. When the voltage is high, as it is when there is no load on the station, the substation shuts down. When an approaching train causes reduction in line voltage, the motor generator sets are automatically started and connected to the line.

### *Locomotive Performance*

The amount of traffic handled over a 35-year period on the electrified sections is shown in Table 4.

In 1918, the schedule time for Train No. 16, the fastest passenger train between Avery, Idaho, and Harlowton, Mont., was 15 hr. The present schedule for that train, the "Olympian Hiawatha," is 10 hr 30 min.

In June 1918, the schedule for Train No. 64, the eastward time freight between Avery and Harlowton, with 2,800 tons trailing, the maximum tonnage at that time, was 36 hr 45 min. Today, with 5,800 tons trailing, the schedule for this time freight is 23 hr 30 min, and the train is making this schedule. Not all of the saving in time is due to electrification, but the electrification system has been able to keep pace with changing times.

Passenger and freight train schedules, and freight train tonnage on the Coast division have been improved in like proportion.

Of the 62 bipolar locomotive traction motor armatures (60 in service and 2 spare armatures), there are still 10 armatures with original windings which have never had a failure of any coil. A record of the failures which have occurred on these armatures indicates that about 80 per cent have been caused by mechanical damage.

### *Majority of Armatures Rewound*

Most of the armatures on the other locomotives have been rewound. Some of this was done on a program basis to remove windings which were assumed to be approaching the end of their life or to remove windings which had been damaged mechanically, or where moisture or dirt have caused an insulation failure.

Most of the classified repairs to electric locomotives are now being made in the railroad's shops at Milwaukee, Wis.

All other locomotive maintenance functions including rewinding of motors, is done in the railroad's completely re-equipped shops at Deer Lodge, Mont., or in the shops at Tacoma, Wash.

A few locomotives have been scrapped, and 12 new locomotives were purchased within the past few years. Four electric-geared freight units were converted to two two-unit locomotives for passenger service.

From the results obtained to date from the program of classified repairs to electric locomotives which has been instituted, it is apparent that this program will materially improve performance and reduce maintenance costs to such an extent that the cost of repairs will be amortized in a relatively short period.

**TABLE 3—MILWAUKEE ELECTRIC LOCOMOTIVES NOW IN SERVICE**

| Number | Type | Description |
|---|---|---|
| 5 | EP3 | Westinghouse passenger |
| 5 | EP2 | General Electric bipolar passenger |
| 2 | EP4 | General Electric #750-type passenger |
| 2 | EP1 | General Electric 2-unit geared passenger |
| 4 | ES2 | General Electric 80-ton switchers |
| 10 | EF4 | General Electric #750-type freight |
| 76* | EF1-2-3-5 | General Electric geared freight |

*Units—used 1, 2, 3 or 4 to a locomotive.

**TABLE 4—TRAFFIC AND POWER CONSUMPTION, 1916 to 1953 INCLUSIVE**

| | |
|---|---|
| Gross ton-miles | 95,710,107,000 |
| Passenger car-miles | 239,849,335 |
| Electric power consumption (at 2,300 volts) | 5,230,094,926 |
| Cost of electric power | $38,960,275* |

*Varying prices for power have been paid over this period. The present rate on the Rocky Mountain division is a flat rate of 0.536 cents per kwh and on the Coast division it is 0.5 per kwh plus a charge for hourly power demand 5 to 6 p.m., 5 days per week during the period October 16 to February 15, inclusive, making the average yearly cost per kwh approximately .546 cents per kwh.

# Benchmarks and Yardsticks

**THERE IS AN UNCONVENTIONAL** little cartoon that for the last year or so has been going the rounds among the masculine part of the population. It is a drawing of a man engaged in a rather homely task, and the caption reads: "The One Man in the Organization Who Knows What He's Doing."

**This cartoon** could not have been as popular as it has, except for the fact that so many people *are* hazy about what they're doing, or why. For example, a group of railroad officers might be asked what they are striving for. The answers, aside from merely self-serving ones, might be: Better track, or reduced accounting expense, or more carloads, or better utilization of locomotives, or more net income.

**Where do people** get their objectives—and how can they tell right ones from wrong ones?

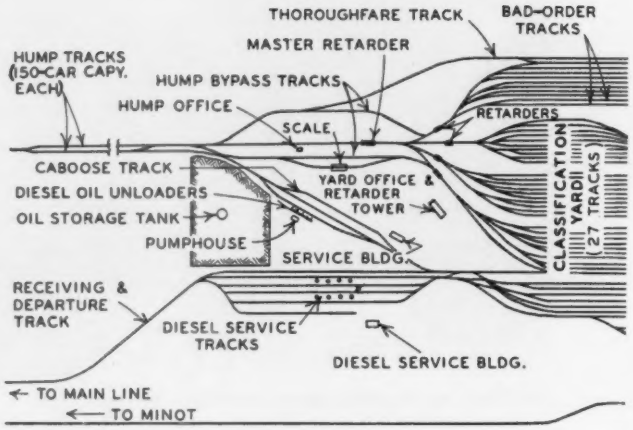
**The answer,** of course, lies in *philosophy*—a word which frightens some people and arouses derision in others. But every man is a philosopher, to some degree, because every man does some thinking and reaches some opinions about himself and the world around him. There are no non-philosophers, although some are better than others.

**When people reach** some degree of mutual agreement on reasonably accurate ways of thinking about what they're on earth for, and how they must behave to lead pleasant lives—the world has one of its infrequent periods of relative peace and general prosperity. The latest such period ended over 40 years ago—in 1914.

**It might be contended** that this subject has nothing to do with railroading. But it takes a good man—with a reasonably accurate and wholesome idea of what he's up to—to make a good railroad man. No amount of know-how can substitute for a serious lack of know-why. It's the know-why that puts the punch into the know-how, and keeps the know-how from being used for evil purposes.

**Only once in a long time** does anybody come along with persuasive explanations of such primary and important questions, written in language simple enough for ordinary laymen like us to understand. This has now happened in a little book by Walter Lippmann entitled: "The Public Philosophy —On the Decline and Revival of Western Society." The book, also mentioned on our "Forum" page in this issue, is short enough to be read at one sitting, and it contains enlightenment on a number of questions that are vitally important to all of us. For example:

**At what point** does "free speech" become an abuse that must be suppressed? How far can "democracy" go without committing suicide? Is the right to property a "natural" right or merely a convention? J.G.L.




## ON THE GREAT NORTHERN . . .

# Modern Hump

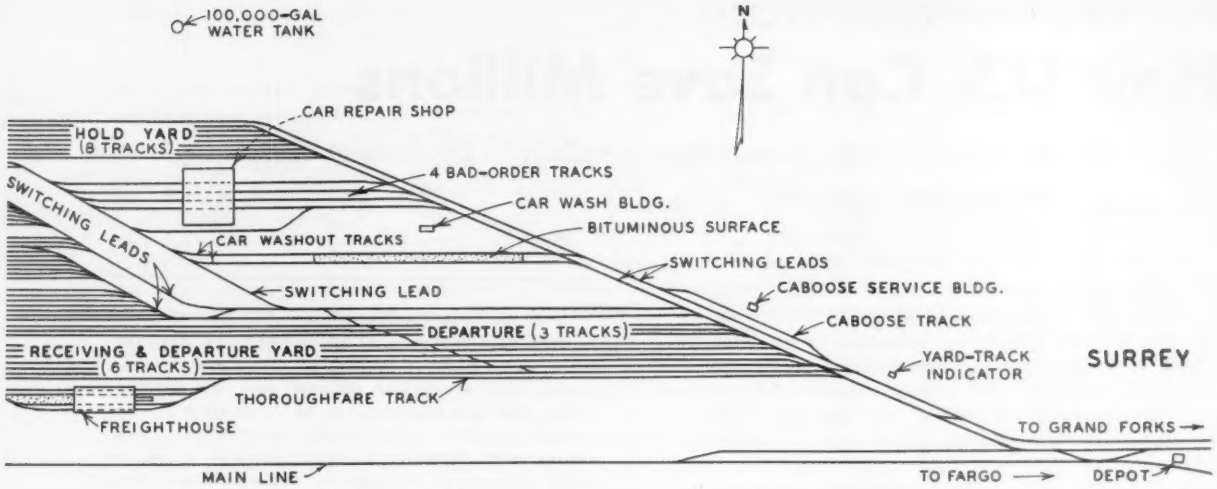
**Compact layout will be completely new and modern in every respect, including latest equipment for speedy classification of cars**

Construction is scheduled to begin about April 15 on a new "automatic" freight-classification yard for the Great Northern at Minot, N.D. It is expected that construction of the $6-million yard and auxiliary facilities will require about 18 months.

The new installation, just east of Minot, will occupy an area of about 470 acres lying north of the present double-track main line, from a point 1½ miles east of the Minot city limits and extending easterly to Surrey, N.D.

Minot was selected as the location for the new facility because of its strategic position on the Great Northern. The road's main lines from Minneapolis and St. Paul on the one hand, and from Duluth-Superior and Grand Forks on the other, join just east of Minot. To the west are junctions for lines to Great Falls, Billings and Butte where interchange is made with railroads to the south and southwest. Farther west are connections with other lines and the Pacific Coast terminals. Thus, cars moving in either direction can be blocked at Minot for delivery to connecting lines or for set-out at the various terminals without further classification.

The main yard will have six receiving and departure tracks, all capable of handling trains in excess of 150 cars, and 40 classification tracks with a total capacity of 911 cars. Classification and retardation will be handled by one master and four group automatic car retarders, and automatic push-button switch-control equipment for activating power switches to classification tracks. Auxiliary facilities will include a combination yard office and retarder-control tower, a




**MINOT YARD will have a compact layout designed to speed up classifying of cars for interchange at various points along line and for set-out at other terminals. Freight-forwarder cars will also be worked.**

# Yard for Minot

102-ft by 600-ft freight house and transfer platform, and car-repair facilities embracing a 144-ft by 300-ft shop and tracks for washing out and conditioning freight cars. Diesel-locomotive servicing facilities will also be provided.

Since the Minot area produces a considerable amount of lignite coal, special tracks are necessary for handling the cars involved. Minot is also designated as grain-inspection point, hence trackage is required for holding cars of grain for inspection and determination of destination. Eight special tracks are to be provided for these requirements.

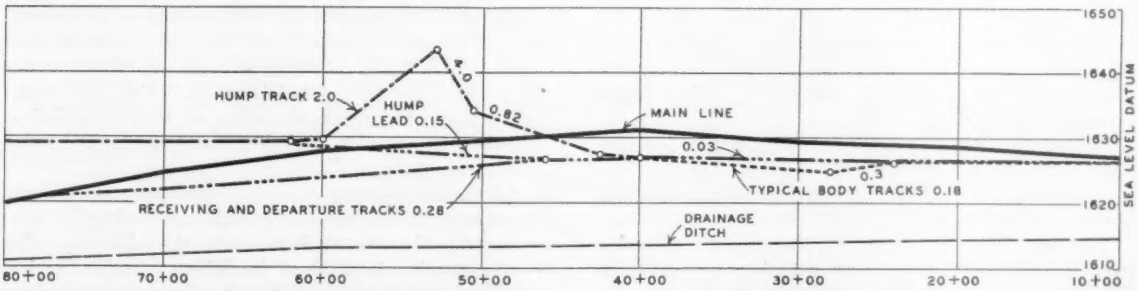
The terminal will be served by an extensive communication system employing two-way radio, paging and talk-back speakers, automatic telephone, Teletype, and pneumatic tubes.

Trains arriving from the east and west will go into the receiving yard where the road locomotives will be uncoupled and moved to the diesel-servicing tracks. A yard engine will then pull each train up the hump lead from the receiving yard to the hump tracks where the cars will be pushed over the hump and continuously classified into groups and blocks.

While trains are being classified, freight-forwarder cars from eastern points will be moved to the freight-house transfer platform where lcl merchandise will be consolidated or redistributed for shipment to points on lines west of Minot. After handling at the transfer platform, the cars will be placed on a departure track for placement on outgoing trains. Cars which were "bad ordered" during inspection on arrival will be moved via one of the hump by-pass tracks to the car-repair shop where they will be repaired, then returned to their proper classification track.

Automatic retardation will incorporate radar and automatic-weighing equipment which will determine the "rollability" of each car or a group of cars moving over the hump. The retarders will then be so activated as to control the speed of cars moving into the classification tracks for proper coupling impact. Following classification, blocks of cars will be moved to the departure tracks at the east end of the yard for make-up into outgoing trains.

The yardmaster will be located in a tower at the yard office so he can observe operations throughout the facilities. He will be able to communicate instantly with yard crews via the two-way radio network, and with other operating personnel by the use of paging and talk-back speakers and the automatic-telephone system. Floodlight towers at strategic locations throughout the yard area will provide illumination.




**PROFILE of west end of yard area shows grades on all principal tracks. Hump will ascend on a 2 per cent grade to an elevation 14 ft above that of the tail tracks and descend on a steep 4 per cent grade to master retarder.**

HOOVER COMMISSION REPORTS . . .

# How U.S. Can Save Millions

**Businesslike traffic management, especially in Department of Defense, would achieve many economies**

The Commission on Organization of the Executive Branch of the Government—commonly referred to as the Hoover Commission—has presented to Congress its report on government traffic management. It has found individual situations where commendable efficiency is exhibited, but it has also found very abundant evidence of duplicated effort, cross-hauling, poor organization, lack of understanding of traffic management functions, and substantial waste. It particularly emphasizes the apparent indifference of many government traffic men to the terms and intent of the national transportation policy.

In many important phases the commission report is based on the findings of a so-called "task force," a subcommittee of the Committee on Business Organization of the Department of Defense. The chairman of this subcommittee is Perry M. Shoemaker, president of the Lackawanna. The freight phase of the task force study was directed by John B. Keeler, former traffic vice-president of the Koppers Company, while the director of the passenger study was former ICC Commissioner James K. Knudson.

The complete report of the task force will be filed with Congress in the near future, and the Hoover Commission report makes it clear that its recommendations "do not necessarily coincide with all of those of the subcommittee, but include the results of independent investigation by the commission's staff and the experience of the members of the comission."

Efficiency in the management of the government's transportation activities is vitally important to all agencies of transportation, and to the taxpayers, because of the immense movements of freight and passengers and immense outlays involved. In the fiscal year 1953, according to the Bureau of the Budget, the expenditures of the federal government for freight and passenger transportation were about $2.6 billion. The commission estimates that, when transportation expense incorporated in other costs is added to this figure, the total expense to the government for transportation in that year was close to $3 billion.

In fiscal 1954 the Department of Defense alone generated more than 9.2 billion passenger-miles within the United States, at an estimated cost of some $400 million, the report says, and this one department's freight charges for that year within continental United States exceeded $640 million.

"There is a general lack of modern traffic management in the federal government," says the report. "Due to the lack of an overall plan, there results duplication, inefficiency and waste."

The task force is quoted in the report as having pointed out that "government agencies do not make the fundamental distinction between traffic *management* and traffic *operational functions*. It states that the government's traffic problems are much the same as those of a commercial firm with multiple-plant operations where the general traffic manager and the traffic control office perform traffic *management* and, at the same time, traffic directors at various plants perform the *operational functions* incidental to day-to-day handling of traffic. These operating personnel are responsible to the general traffic manager, even though these individuals are carried on the payrolls and are under the disciplinary supervision of local plant management.

**"It is not to be assumed," says the Hoover Commission, that evidences of inefficiency and waste in government traffic management result from negligence. They are "clear evidence that our existing system has not provided for an integration of inventory control, procurement, warehousing, and management direction of transportation so as to avoid substantial wastage of transportation and storage dollars. Someone is paying the cost. It is hard to visualize this someone not being the taxpayer."**

"The fact that the federal government has a variety of traffic movements does not differentiate the government's traffic problems from those of private industry. . . . *Traffic management* in government, as differentiated from *traffic operations*, may be defined as the *central determination and direction* respecting policy control of the movement of persons and goods in accordance with movement planning of routing, of overall costs, of research and study of government traffic movements, of representation of the government in proceedings before regulatory agencies and carrier rate bureaus, of economics of facility locations, of development of improvements in service, of review of handling procedures, and of nearby procurement that minimizes haulage."

The first Hoover Commission, set up in 1947, "reported sharply on the lack of transportation management [in the government]," says the report, "and recommended the establishment of a central traffic organization adequately staffed with trained personnel and headed by a traffic manager of wide experience under the General Services Administration, which was established upon the recommendation of that commission. Certain . . . agencies, including the Department of Defense, were exempted."

After establishment of the Department of Defense some progress was made in coordination of traffic management of the various branches of the military service by the creation in 1950 of the Military Traffic Service.

The commission found that the Defense Department in the calendar year 1953 had 5,702 persons assigned

to freight traffic management, with an annual payroll of more than $21 million. Management of traffic in the department heads up in a director of transportation and communications. In the opinion of the commission's task force, this officer's authority is entirely inadequate. "The traffic is in fact separately subject to control of the Army, Navy, Marine Corps, and Air Force. Although there is some coordination, in the main each controls its own traffic activities."

Only about 40 per cent of domestic passenger transportation of Defense Department personnel is in fact now within the purview of the department's Transportation Division, i.e., mainly the "transportation request" travel and the group movements made usually under contract.

About 60 per cent of military travel is in government aircraft or highway vehicles or on mileage allowance, the report states, and it concludes that lack of central authority to manage all passenger transportation in the department "results in waste of passenger transportation resources and in a weakening of the nation's commercial transportation system."

The report quoted the task force to the effect that "neither the military nor the civilian shipping agencies of the government are conducting proper audits of freight bills." It noted a task force recommendation that the Department of Defense should set up an audit section for transportation billing, "combining preaudit and final audit into one operation, so organized that carrier charges will be paid within 30 days." The commission, however, commented that this arrangement would, under present circumstances, "be unattainable," and that such a system might result in greater delay in payment than now exists.

The commission sums up the task force findings as to shortcomings in Defense Department traffic management as follows:

(a) Lack of recognition of the key importance of transportation.

(b) Failure to coordinate warehousing and procurement with transportation within and between the services.

(c) Present organization plan subordinates transportation.

(d) Lack of review and improvement of operating performance.

(e) Wide and unsupervised diffusion of technical functions.

(f) Too complete subservience to military control.

(g) Supervision by inadequately trained officers.

(h) Lack of adequate statistical and management control data.

(i) Inadequate salaries for traffic management personnel.

On the basis of its studies the task force recommended that an officer of "assistant secretary" level be assigned the job of administering management of traffic and transportation in the Department of Defense. The commission, however, did not adopt this recommendation. "We believe," the report states, "that adequate results can be obtained by enlarging the authority of a director of transportation," who would, as now, report to the assistant secretary of defense for supply and logistics.

"There is no question of the importance to the nation of an adequate and prosperous transportation system," says the Hoover Commission. "Such a system is essential for national emergency and civil defense. The activities of the federal government as a shipper of persons and property should be carried on with the establishment of such a transportation system in mind.

"The policies and activities of the agencies of the government together have an enormous effect on the nation's private transportation system. Yet, as the task force points out, many of these agencies consider they have little or no responsibility for implementing the national transportation policy. . . .

"There is evident need for redefining the national transportation policy to take account of the government's own policies and activities as an important user of commercial transportation."

## WHAT THE HOOVER COMMISSION RECOMMENDS

- **The National Transportation Policy should be studied and revised by Congress "to make it more definite and detailed."**
- **The government as a user of transportation should "conform to" the National Transportation Policy in the handling of commercial-type traffic.**
- **The Defense Department should have a director of transportation with no other responsibilities except to direct and coordinate traffic management activities in all military services. He should seeks ways to avoid duplication and waste, handle rate and classification matters, prescribe policy on routing and distribution of traffic among carriers, and represent the department before carrier conferences and regulatory agencies.**
- **Duplication of military and civilian personnel performing the same functions should be avoided.**
- **The GSA should "take necessary steps to improve quality" of government traffic management.**
- **Laws should be modified to bring under the General Services Administration's central traffic management set-up those civilian agencies of the government now exempted — except movement of mail and "security classified" material.**
- **Salaries of government traffic managers should be "more nearly competitive" with industry, so "personnel of greater competence" can be hired.**
- **Negotiated rates for government traffic should immediately be made public (except where security is involved).**
- **Agencies and places maintaining tariff files should be selected by the GSA.**
- **Peacetime use of Defense Department air transport should be limited "to persons and cargo carefully evaluated as to necessity," and should be allowed "only after commercial carriers have been utilized to the maximum practical extent."**
- **Possible preauditing of transportation bills should be studied by both the Defense Department and the GSA.**
- **All government bills of lading should be audited by the General Accounting Office.**

# Equipment Can Prevent Damage

**Pullman-Standard's new cushion underframe car is designed to meet the $102 million annual lading damage problem**

**PULLMAN-STANDARD's cushion underframe employs a rubber cushion to absorb shock energy. This cushion, here being lowered into the center sill pocket, consists of rubber pads that compress when an impact causes the center sill to move. No parts of the sill ever go solid against the underframe.**

**ACTION OF RUBBER CUSHION in the center sill is indicated in this model. Force on sill (see direction of arrow) compresses the cushion and thereby dampens impact shock.**

Loss and damage claims paid to shippers by Class I railroads in 1954 amounted to about $102,800,000, equal to nearly one-sixth of the industry's net income for the year. This figure makes no allowance for the indirect cost of filing and processing claims, nor does it include anything for business that is lost when a digruntled shipper or receiver decides to use other forms of transportation. It has been estimated that "hidden costs" of loss and damage actually amount to twice the claim payments. If such estimates are valid, it means additional costs in 1954 were about $204 million—a hard-to-digest total of $306 million for the year.

Strenuous efforts are being made by many groups to reduce freight damage, and practically every railroad in the country carries on programs aimed at loss and damage prevention. The AAR's Freight Loss and Damage Prevention Section, under the direction of Carl A. Naffziger, plays a prominent role in this campaign.

Now one of the nation's major car builders, Pullman-Standard Car Manufacturing Company, is contributing toward freight damage prevention with a new type freight car underframe designed to dampen shocks applied through the couplers.

Service tests to compare these cushion underframe cars with conventional box cars have been conducted by Pullman-Standard and eight railroads. A total of 100 cars were used. The cooperating railroads were the Western Pacific, Bangor & Aroostook, New York Central, Norfolk & Western, Chesapeake & Ohio, Erie, Pennsylvania and Great Northern. Results from a number of test shipments have been compiled, relating both to claims and to impact intensity.

In addition to this large scale testing program, the Western Pacific and Pullman-Standard had previously made precise studies on performance of the cushion underframe (CU) car. They worked with a CU car and a standard box car to measure lading shifts, both from over-the-road movement and from switching.

The roadway "laboratory" was the WP line between Oakland, Cal., and Salt Lake City, Utah. A CU car and a conventional box car were each loaded identi-

## HOW CLAIMS WERE CUT IN TEST SHIPMENTS

| | *27 Cushion Underframe Shipments* | *23 Comparison Car Shipments* |
|---|---|---|
| Total Claims | $1,958.03 | $3,270.64 |
| Average Claim Per Shipment | 72.52 | 142.20 |
| Per Cent Revenue Paid Out In Claims | 45.5 | 98.8 |

**LADING inside the cushion underframe car (right) was not visibly disturbed by impact tests. Inside the conventional car (left) there were indications that impact shocks were transmitted through to the load.**

cally with approximately 42,000 lbs. of bottled juice, in cartons. Each car was subdivided into six "stations" and twenty spot inspections were made in the course of round trips totaling 3,800 miles. To provide all possible experience, the test cars were placed at various points in the trains. Findings in these over-the-road tests showed that in the CU car the shift in lading was less than half that in the standard car.

Impact tests were conducted in the WP Oakland yards, using identical lading. Speeds and relative positions of the test cars were varied to cover a wide range of conditions for the striking and struck cars. As was true in the over-the-road tests, lading damage was substantially less in the CU car. Maximum shift in the conventional car was 20.75 inches, compared to 13.5 inches for the cushion underframe car.

A large percentage of the claims that fall under "Unlocated Damage," "Improper Handling Damage" and "Concealed Damage," apparently result from vertical and horizontal shocks produced in train service and classification yards. Railroad officers have estimated that from 20 to 50 per cent of freight car repair bills can be attributed to impact, especially coupler impact.

It is recognized that the human body has a better chance of survival in a fall from a building if, instead of falling directly to the pavement, the body is stopped by an awning or a car top. The principle is simple. Damage is decreased if the falling body comes in contact with material that will "give." If the stopping material "gives," there is time for the falling body and the stopping material to approach a common speed at a more gradual pace. In the case of a punch on the jaw, stepping back when the blow lands cushions the impact. Pullman-Standard says this idea of "rolling with the punch" is the basic principle behind its new cushion underframe.

The manner in which the CU construction reduces vertical shock as well as coupler shock can best be described by comparing it with the action of an automobile when brakes are applied suddenly. The vehicle pitches downward on its front springs while the rear rises. Passengers are thrown forward. Similarly, when a horizontal force is applied to the coupler of a railway car, one end of the car pitches downward while its opposite end rises. This, in effect, frees the lading so it will be hurled about in the car. Obviously, these lading disturbances will be lessened if vertical pitch is diminished; and this can be accomplished by reducing the horizontal forces produced by coupler impact.

The prevention of damage inside loaded cars points up the necessity of getting struck cars and striking cars to reach a common speed gradually. There must be sufficient absorption of the impact energy and means must be provided to that end. The P-S cushion underframe absorbs this impact energy three ways: (1) The standard AAR draft gear, (2) the sliding center sill and (3) the cushion in the sliding center sill.

Pullman-Standard people believe one particular advantage of its sliding sill construction can be realized in humping operations. In a hump yard a car is struck twice—as a rolling car when it joins a string of standing cars, and as a standing car when struck by the succeeding rolling car. The cushion underframe does more to prevent damage as it absorbs these impacts.

The essential feature of the cushion underframe is a sliding center sill which extends continuously from coupler to coupler and passes through bolsters and crossbearers. Standard couplers, yokes, and draft gears are installed at both ends of this sliding sill just as on conventional cars. Movement of the sliding sill is resisted by one double-acting cushion at the center.

When the sill is moved through the car by a pull or buff applied at either coupler, the cushion is squeezed between lugs on the center sill and an abutment attached to the car body structure. In other words, instead of the usual rigid connection of center sill to car body, the central cushion forms a resilient connection between the sliding sill and the car.

A large shear plate transmits force from the cushion abutment to the side sills. This shear plate is bounded by crossbearers near the door posts and extends continuously between side sills.

Regardless of its position in a cut of freight cars—whether striking another car, being struck, or backing up a struck car—the cushion underframe car is, in Pullman-Standard people's opinion, much better protected and thus much less liable to lading damage than a car of conventional design. It affords, in effect, added protection to all cars associated with it.

## ROUGH HANDLING RECORDINGS

| Shipments Reported | No Impacts Recorded | Impacts Recorded | Zonal Record of Impacts | | | | |
|---|---|---|---|---|---|---|---|
| | | | Normal Zones | | Rough Zones | | |
| | | | 1 | 2 | 3 | 4 | 5 |
| 154 CU Cars.... | 108 | 46 | | 23 | 25 | 2 | 1 |
| 136 Comparison Cars..... | 41 | 95 | | 95 | 127 | 18 | 3 |

As indicated by Zone 3 records in this table, rough handling occurred only 25 times in cushion-underframe cars as compared with 127 times in conventional cars.

VICE-PRESIDENT AND GENERAL MANAGER H. C. Wyatt told the delegates to return to their jobs as "missionaries of better service," because better service requires the cooperation of all employees. It is a "teamwork job."

TRAFFIC VICE-PRESIDENT F. S. Baird urged that every N&W employee become a business getter for the railroad. The traffic department, he said, "does not have exclusive rights to sell N&W service."

N&W HOLDS

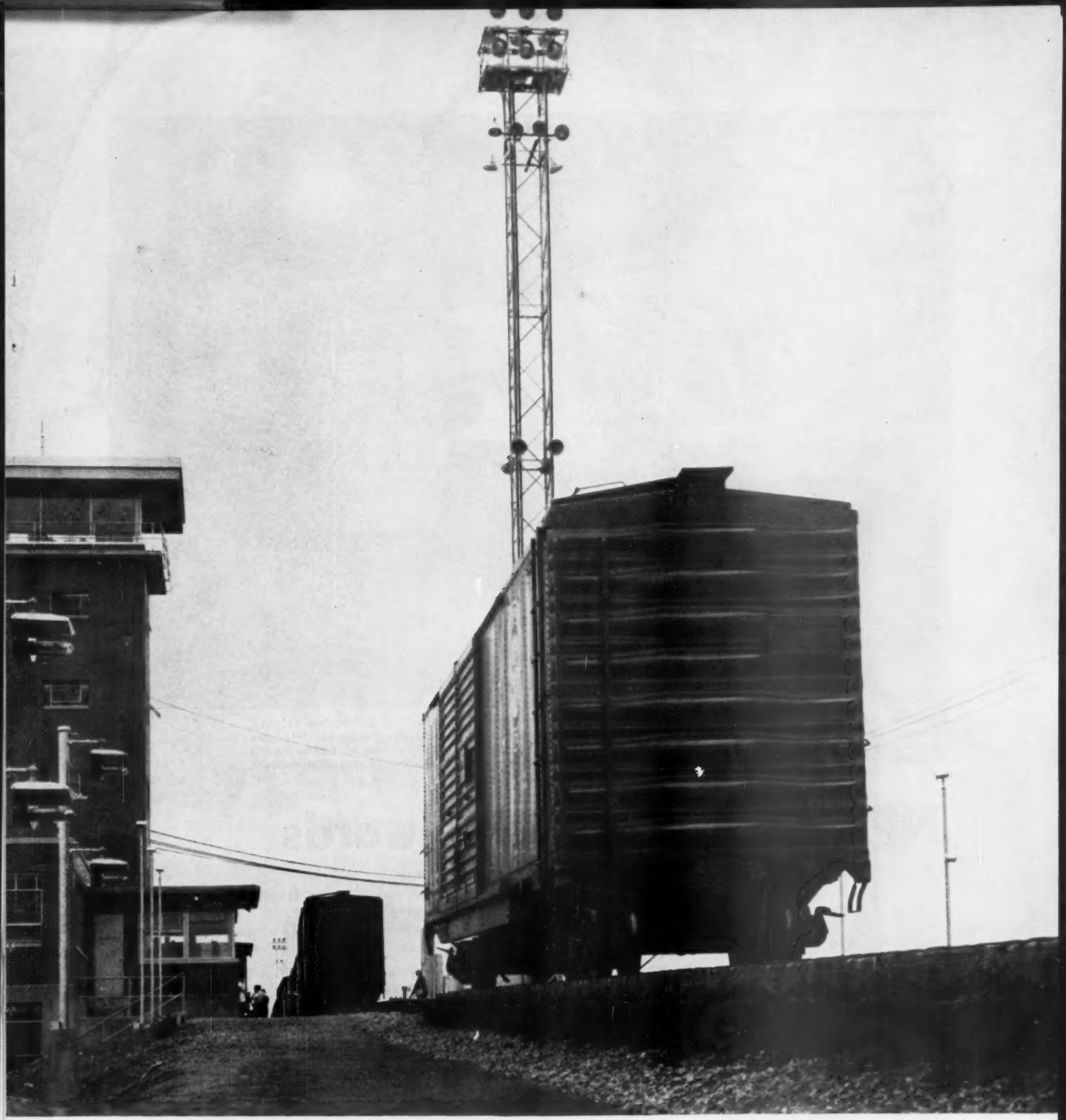
# 30th Better Service Conference

March 25-26 meeting at Hotel Roanoke, Roanoke, Va., was attended by about 500 delegates representing local Better Service Clubs throughout the system

GENERAL CLAIM AGENT L. C. Yates, the conference's general chairman (right), and Assistant General Claim Agent A. D. Schwarzell giving the program a final check, just before the opening session.

MEETINGS, LIKE THIS, of the conference's six committees were workshop sessions, out of which came reports on safety, sales and service, careful car handling, courtesy, fair treatment for all transport agencies, and citizenship.

MAKING HIS "ANNUAL REPORT to the people who do the work," President R. H. Smith called the 1954 results a "good showing," and predicted earnings will be better.



# this is the end

THE **Standard** IMPROVED DREADNAUGHT END **IS** THE ULTIMATE in structural design for freight car ends. The car with **Standard** *Railway* components specified *always* has the benefit of the most recent scientific improvements. **Standard** *Railway* components are *lighter* for equal strength, *stronger* for equal weight . . . *increased* car life . . . *decreased* damage claims . . . *More profitable per invested dollar!*

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**FRP FOUNDER Robert R. Young (left) and James G. Lyne, chairman of the federation (right), admire the "Rail Oscars" held (from left to right) by Robert Macfarlane, president, Northern Pacific (passenger service award), William R. Moore, general director of public relations, Union Pacific (public relations award) and Shelly Pierce, financial editor, Journal of Commerce (journalism award).**

# NP and UP Get FRP Awards

## Passenger service improvement and public relations initiative recognized at meeting attended by many executives

The Northern Pacific and Union Pacific on March 24 received from the Federation for Railway Progress its annual awards for, respectively, "outstanding achievement in progressive passenger service," and "extraordinary contribution in the field of public relations."

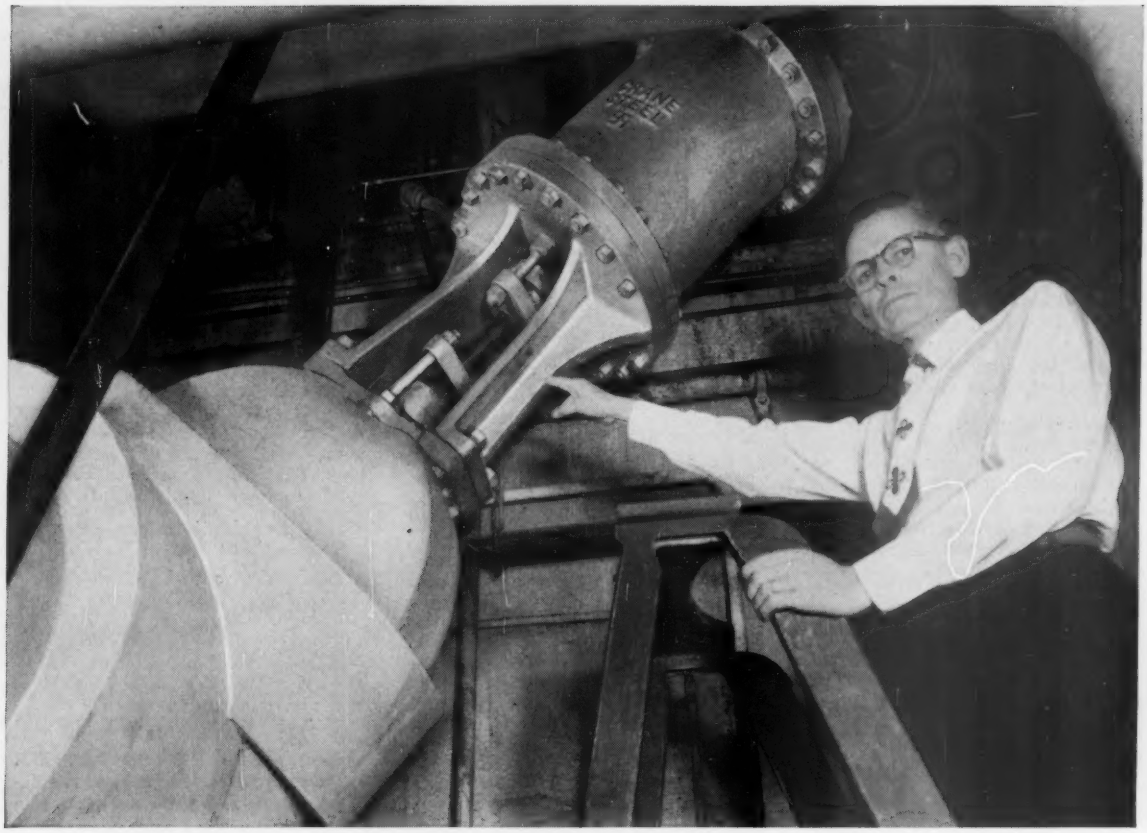
The awards were presented at the federation's eighth annual dinner at New York by Robert R. Young, founder of the organization, and were accepted by Robert S. Macfarlane, president of the NP, and William R. Moore, general director of public relations of the UP. Mr. Young then presented the federation's annual journalism award to Shelly Pierce, financial editor of the New York Journal of Commerce, "in recognition of his clear and objective reporting of news of the transportation industry."

The program included a panel discussion of railroad regulation by four members of the New York Society of Security Analysts, Herbert F. Wyeth of Shearson, Hammill & Co.; Arthur Jansen of W. E. Burnet & Co.; F. N. Jean Gindorff; and Henry F. Van Ells of Bache & Co. This panel was in general agreement that steps toward less governmental regulation of common carriers are desirable, both in the form of constructive revisions of the Interstate Commerce Act and in enlightened interpretation by the ICC of the act and the national transportation policy as now stated.

Mr. Young, in making the foundation awards, outlined some steps the railroads are taking to provide better service, and suggested others, such as total replacement of the freight car fleet with new equipment.

The presidents of the Association of American Railroads, the American Short Line Railroad Association, the Transportation Association of America and the Railway Business Association, as well as the chief executives of 19 Class I railroads and of 7 railroad brotherhoods, were among the 900 people attending the meeting.

The headline speaker of the evening was Senator Richard L. Neuberger, Democrat of Oregon.



# This CRANE VALVE begins new life after 37 years' service!

**THE CASE HISTORY**—World War One still raged when Cincinnati Gas & Electric Co. installed this Crane steel gate valve in 1917 at its Front & Rose Street Station. Ever since, it has safely controlled the main steam lead to No. 1 turbine—always making tight closure when needed—always responding smoothly to its hydraulic operator. For 37 years it has given such service with no more than routine maintenance—under operating pressure of 250 psi at 600 deg. F.

In 1954, the No. 1 turbine was renewed. The Crane steel valve—with complete confidence in Crane durable quality as demonstrated—was given limited preventive maintenance while down, and reinstalled in its original location.

Long life with minimum maintenance is a deeply rooted characteristic of Crane valves. That's what makes them industry's first choice today for low ultimate cost.

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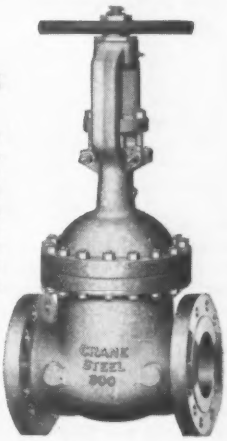
**...a complete line**

Here is steel casting at its best, by the pioneer in steel valve development. Here is value in durability . . . dependable operation . . . and in low-cost maintenance that sets Crane steel valves apart from the ordinary. They're made for every service—in all pressure classes and sizes. Consult your Crane Catalog or Crane Representative.



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**CRANE'S FIRST CENTURY . . . 1855-1955**

## Supply Trade

(*Continued from page 16*)
dertaken soon at the division's West 47th street plant, Chicago. The project calls for construction of a two-story office building and a one-story factory and warehouse to be built adjacent to the present buildings.

**W. F. Munnikhuysen,** executive vice-president of **Koppers Company,** has been elected chairman of the board, and **Fred C. Foy,** vice-president and general manager of the Tar Products division, has been elected president and chief executive officer.

**R. N. Chipman,** manager of the railroad weed control department, General Chemical Division of **Allied Chemical & Dye Corporation,** has been named consultant on railroad weed control. He has been succeeded by **W. P. Morrison,** assistant manager of the department.

### OBITUARY

**Cecil R. Mills,** 76, retired vice-president and director of the Simmons-Boardman Publishing Corporation, publishers of *Railway Age*, died at Daytona Beach, Fla., March 28.

## Financial

### ICC Sets Hearing On New Haven-B&M Control

The Interstate Commerce Commission has instituted its investigation into charges that interests controlling the New Haven are attempting to acquire control of the Boston & Maine.

According to a commission statement, the investigation is based on "information developed by its informal inquiry into reports that stock transactions and securing of proxies will lead to acquisition of control of the B&M at the scheduled stockholders' meeting on April 13." The investigation was set for hearing by ICC Examiner Lyle at Boston April 4.

First announcement of the proposed investigation was reported in *Railway Age*, March 14, page 83, following a request by Massachusetts Senators Saltonstall and Kennedy that ICC conduct an inquiry.

### "Quick Assets" Down 5% at Close of 1953

Railroad "quick assets" were down $94.4 million, or 5.1%, at the end of last year compared with December 31, 1953.

This was shown in the March 18 "Monthly Comment" of the Bureau of Transport Economics & Statistics, Interstate Commerce Commission.

Quick assets, described by the bureau as cash and temporary cash investments, were sufficient to cover 97.2% of the Class I roads' total current liabilities at year-end 1954. This compared with a corresponding coverage figure of 84.3% at the same time the year before.

The report also points out that, excluding materials and supplies, net working capital for the roads as a whole increased from $604.7 million on December 31, 1953, to $809.2 million in 1954, or 33.8%. Materials and supplies for all roads, the report continues, decreased from $839.9 million at year-end 1953 to $698.0 million December 31, 1954, or 16.9%.

Net corporate working capital (total current assets less total current liabilities) for Class I roads increased 4.3% in the same period, from $1,444.5 million to $1,507.3, the report states.

**Boston & Maine.**—*Settlement with Sakis Group.*—Finding no illegality in the arrangement, the ICC has discontinued its investigation of the "nuisance settlement" which resulted in withdrawal of the so-called Sakis group, a stockholders' committee, from participation in the section 20b case involving voluntary adjustment of this road's capital structure. The investigation, docketed as No. 31257, was instituted in May 1953. After expressing its conclusion that there was no basis for a finding of illegality, the commission went on to criticize the settlement.

"We would," the report said, "be derelict in the discharge of our responsibility if we failed to state that we are concerned with certain events and circumstances which, in our opinion, do not altogether comport with a high standard of ethical conduct or an objective concept of public interest."

The settlement involved payment by the railroad of $65,000, and commitments as to retirement of B&M preferred stock. The commission said that neither its conclusions, nor anything stated in the report, should be construed as constituting approval of the settlement agreement. A dissent came from Chairman Mitchell, with whom Commissioner Johnson agreed.

**Pacific Electric.** — *Trackage Rights.*—This road has applied to the ICC for trackage rights over 37.1 miles of the Southern Pacific between Los Nietos, Cal., and Dyer in order to permit abandonment of freight operations through the business section of Santa Ana.

**Southern Pacific.**—*Merger of Subsidiaries.*—The ICC has found the proposed merger of several SP subsidiaries into the parent company (*Railway Age*, November 29, 1954, page 19) to be in the public interest. Authorization for the merger was withheld, however, pending approval by stockholders at their regular meeting May 11. The plan contemplates merger of the Arizona Eastern, the El Paso & Rock Island and the El Paso & Southwestern into the SP Railroad Company, and then merger of the latter and the Dawson into the SP Company.

### Investment Publications

[The surveys listed herein are for the most part prepared by financial houses for the information of their customers. Knowing that many such surveys contain valuable information, *Railway Age* lists them as a service to its readers, but assumes no responsibility for facts or opinions which they may contain bearing upon the attractiveness of specific securities.]

**Smith, Barney & Co., 14 Wall street, New York 5.**

*Railroad Security Exchange Suggestion.* Railroad Bulletin No. 187, March 15.

**Vilas & Hickey, 49 Wall street, New York 5.**

*Mid-Western Roads Want Better Rate Divisions.* March 4.

*Missouri Pacific Agreed Plan.* March 2.

*1954 Comparison of Railroad Income Bonds.* February 23.

## Securities

**Chicago, Rock Island & Pacific.** —*Debenture Issue.*—This road has advised the ICC that its application to issue $65,000,000 of 40-year income debentures (*Railway Age*, February 28, page 37) was partly in error. The road said that the proceeds from the issue will not be used to pay dividends on its preferred stock as its application stated. The dividend payments will be financed through other sources, the road said.

**Denver & Rio Grande Western.** —*Stock Split.*—This road has applied to the ICC for authority to issue 2,339,710 shares of no par common stock to achieve a three-for-one split up of its 799,903 shares of $100 par common stock now outstanding. The road also sought authority to issue and sell 50,000 shares of $100 par common (or 150,000 shares of no par common if the stock split is effectuated) under a restricted stock option plan to be offered to selected officials and key personnel.

### Dividends Declared

**ATLANTIC COAST LINE.**—5% non-cumulative preferred, $2.50, semi-annual, payable May 10 to holders of record April 25.

**NORFOLK & WESTERN.**—4% adjustment preferred, 25¢, quarterly, payable May 10 to holders of record April 14.

**READING.**—50¢, quarterly, payable May 12 to holders of record April 14.

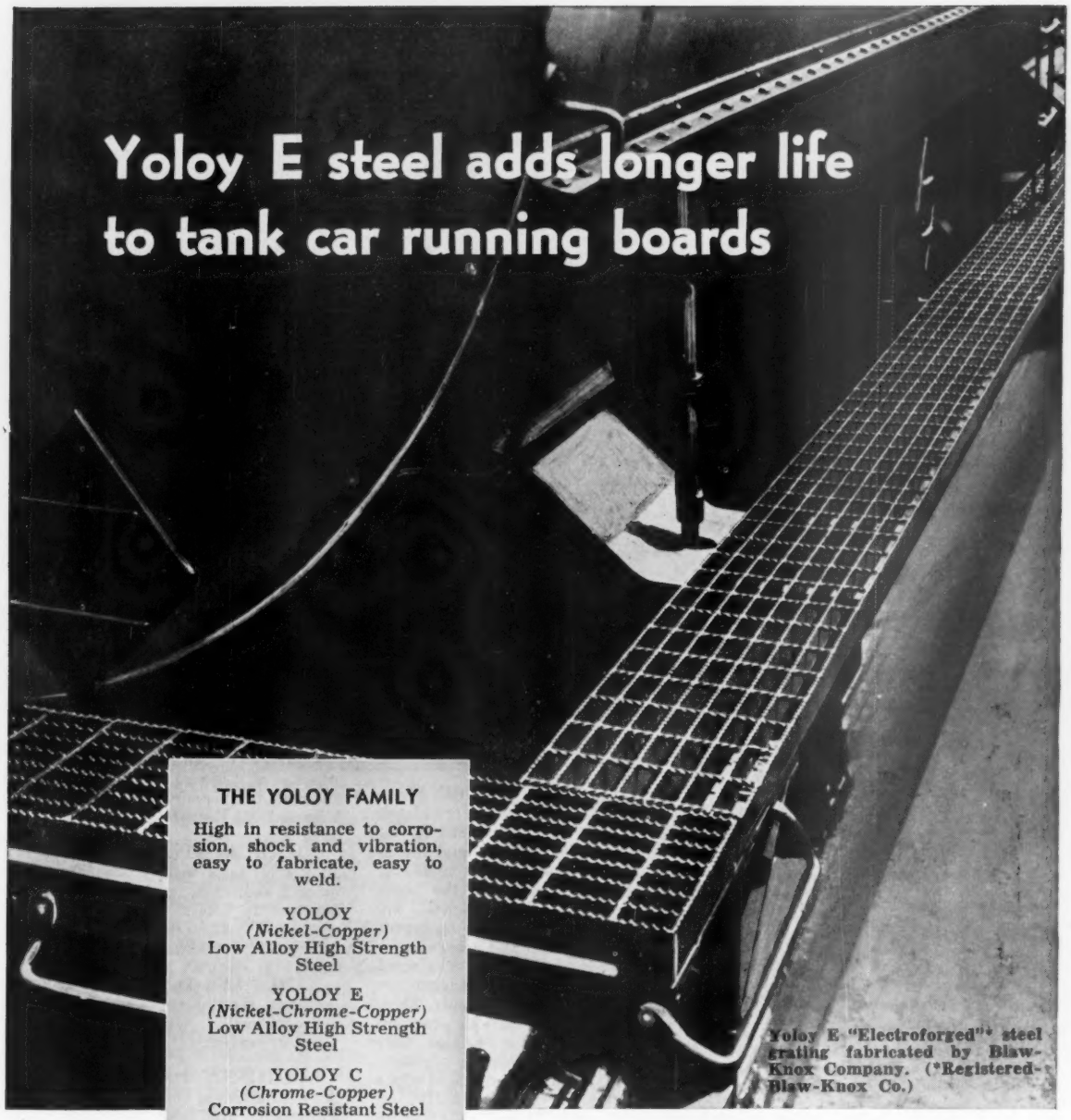
### Security Price Averages

| | March 29 | Prev. Week | Last Year |
|---|---|---|---|
| Average price of 20 representative railway stocks | 91.26 | 88.57 | 60.53 |
| Average price of 20 representative railway bonds | 99.26 | 98.91 | 95.03 |



*Additional news appears on pages 56 and 58*

# Yoloy E steel adds longer life to tank car running boards



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# Railway Officers

**AMERICAN REFRIGERATOR TRANSIT COMPANY.**—**James G. Blair,** western traffic manager at Denver, has been appointed general traffic manager at St. Louis, succeeding **John F. Egan,** retired. **Nathan C. Coleman,** general agent at Salt Lake City, has been transferred to Denver. **Merle C. Sinclair,** district freight agent at Denver, becomes general agent at Salt Lake City.

**ATLANTA & WEST POINT — WESTERN OF ALABAMA — GEORGIA.** — **H. L. Peters, F. R. Barfield** and **E. R. Blake** have been named general agents at Tampa, Fla., Savannah, Ga., and Miami, Fla., respectively.

**CANADIAN NATIONAL.**—**J. C. Gardiner,** assistant transport economist at Toronto, has been appointed transport economist at Montreal. **J. R. Burns,** assistant transport economist at Moncton, N.B., has been transferred to Toronto.

**CANADIAN PACIFIC.**—**J. Norman Lennie** has been appointed auditor of ancillary operations. Mr. Lennie will retain his duties as comptroller of CP Steamships and will also be responsible for accounting in respect to the company's hotels and communications departments.

**T. J. Boyle,** assistant engineer in the office of the chief engineer at Montreal, has been named special engineer to deal with engineering problems affecting the CP in the Montreal area arising out of the construction of the St. Lawrence Seaway ship canal.

**GREAT NORTHERN. — C. M. Rasmussen, superintendent, Butte division at Great Falls, Mont. (above), who has been promoted to assistant general manager, Lines West at Seattle, and H. J. Surles (below), who succeeds him (*Railway Age*, February 28, page 38).**

**BALTIMORE & OHIO. — Abram Clark, whose appointment as engineer of bridges and buildings at Baltimore was noted in *Railway Age* March 14.**

**KANSAS CITY TERMINAL.**—Announcement in *Railway Age*, March 7, page 58, of the election of **A. R. Shaw** as president and general manager of the KCT inadvertently antedated by one day his election to the presidency. Mr. Shaw joined the KCT November 15, 1954, as general manager; became vice-president and general manager on December 21; and was elected president and general manager on March 8. In the presidency, Mr. Shaw succeeded **W. N. Deramus,** president and chairman of the Kansas City Southern, who served also as president of the KCT from the retirement of its former president, **B. J. Duffy,** on January 1 until March 8. Prior to joining the KCT, Mr. Shaw served from June 1 to November 15, 1954, as manager, secretary, auditor and purchasing agent of the Denver Union Terminal.

**MISSOURI PACIFIC.**—**Bertram W. Tremayne,** assistant to chief traffic officer at St. Louis, retires April 1, after more than 50 years of railroad service, the last 45 of which have been with the MP. **Paul B. Dudek,** assistant merchandise traffic manager at St. Louis, succeeds Mr. Tremayne, and is replaced by **Louis M. Baker,** general agent at Tulsa. **Carl A. Becker,** coal freight agent at Kansas City, has been named general agent at Tulsa. **A. W. Aylin,** foreign freight traffic manager at St. Louis, will retire May 31 after 50 years of service, and will be succeeded by **J. N. Sanders,** general freight agent at Houston. **B. F. Lane** has been named general agent at Salt Lake City, succeeding **S. L. Love,** deceased.

**MONON.**—**Clarence A. Pfister,** assistant freight traffic manager, has been promoted to freight traffic manager—rates, with headquarters as before at Chicago, succeeding **J. Leon Fortier,** retired. **Arthur P. Schramm,** office assistant to president, replaces Mr. Pfister. **Gilbert L. Harris,** assistant general freight agent at Chicago, has been named freight traffic manager—sales and service there, to succeed **Frank A. Wisberg,** retired. **R. E. Irons,** general agent at Minneapolis, succeeds Mr. Harris, and has been succeeded by **Ira C. Holmes,** who transfers from Portland, Ore. Mr. Holmes' successor is **H. Darrell Koss,** freight and passenger traffic agent at Milwaukee. **Walter F. Smith** has been appointed freight traffic manager — sales and service at Indianapolis, and the position of Southern traffic manager, which he formerly held, has been abolished. **O. T. Collet** has been appointed general agent at Chattanooga, Tenn.

Mr. Pfister joined the road in 1917 as office boy. After holding a number of positions in the tariff, division and rate departments, he was appointed assistant to freight traffic manager in 1947 and in 1953 became assistant freight traffic manager.

**Charles T. Adamson,** auditor of revenue at Chicago, has retired after 43 years of service. His successor is **Edward A. Ramp.**

**NICKEL PLATE.**—**E. G. Parker,** auditor of disbursements, has been appointed auditor of revenues, with headquarters as before at Cleveland, succeeding **E. C. Zinn,** who replaces Mr. Parker as auditor of disbursements.

**SANTA FE.**—**O. L. Gray,** general manager, Coast Lines, at Los Angeles, retired April 1 after more than 45 years of service.

**SOUTHERN PACIFIC.**—**W. M. Jaekle,** assistant chief engineer at San Francisco, has been appointed chief engineer there, succeeding **E. E. Mayo,** who has been named vice-president of the newly organized Southern Pacific Pipe Lines, Inc. (*Railway Age*, February 28, page 8). **Raymond C. Nissen,** assistant to chief engineer, has been promoted to assistant chief engineer, with headquarters as before at San Francisco. **Joseph A. Holmes,** construction engineer at San Francisco, succeeds Mr. Nissen, and in turn has been replaced by **Denman K. McNear,** assistant division engineer at Sacramento.

Mr. Jaekle joined the SP in 1934 as rodman. In 1943 he was appointed division engineer, Rio Grande division, and later served in the same capacity on the Coast division. He became construction engineer for line changes in Oregon in 1948; assistant engineer,

## THE BALTIMORE AND OHIO RAILROAD CO.

**128th Annual Report—Year 1954**

| | Year 1954 | Comparison With 1953 (+) Increase (−) Decrease |
|---|---|---|
| **Income:** | | |
| From transportation of freight, passengers, mail, express, etc. | $378,088,687 | −$82,760,299 |
| From other sources—interest, dividends, rents, etc. | 10,509,402 | + 122,835 |
| | $388,598,089 | −$82,637,464 |
| **Expenditures:** | | |
| Payrolls, supplies, services, taxes | $334,189,556 | −$66,954,393 |
| Interest, rents and services | 39,879,744 | − 2,178,927 |
| Total Expenditures | $374,069,300 | −$69,133,320 |
| **Net Income:** | | |
| For improvements, sinking funds and other purposes | $ 14,528,789 | −$13,504,144 |

The full dividend of $4.00 per share was paid on the preferred stock. A dividend of $1.00 per share was paid on the common stock.

In 1954 long term debt in principal amount of $44,286,535 was paid off. During the period December 31, 1941 to December 31, 1954, long term debt, other than equipment obligations, was reduced $204,-904,231, with an annual saving in interest charges of $9,261,515. Equipment obligations increased $57,238,974, which added $1,668,305 to annual interest charges. The net reduction in long term debt was $147,665,257, and the saving in annual interest $7,593,210.

**H. E. SIMPSON,** *President*


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**40 Ton Steel Sheathed Box Cars**
**50 Ton All Steel Gondolas**
**70 Ton All Steel Gondolas**
**8000 Gal. Tank Cars Cl. III**
**Coiled—Non Coiled**
**50 or 70 Ton Flat Cars 40' Long**
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**20 Yd. Koppel Lift Door Cars**
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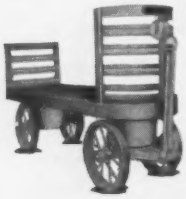
Same features as Express Trucks above including Timken bearing fifth wheel and only six points to grease. Capacity 5,000 lbs., weight 756 lbs.



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DIVISION
KELSEY-HAYES WHEEL COMPANY
DAVENPORT, IOWA

**W. M. Jaekle**

**E. E. Mayo**

**Frank C. Nelson**

**Edgar C. Ordway**

maintenance of way and structures at San Francisco in 1951; and assistant chief engineer in 1953.

Mr. Mayo entered railroad service in 1907 with the Pacific Railway & Navigation Co., now part of the SP. After holding a number of engineering positions with the SP and its subsidiaries, he was named assistant chief engineer at San Francisco in 1934, and chief engineer in 1944.

**Frank C. Nelson,** freight traffic manager, Northern district, at Portland, Ore., has been appointed freight traffic manager, rates and divisions, at San Francisco. His successor is **Edgar C. Ordway,** general freight agent at Portland. **A. E. Anderson,** chief clerk, Mineral Products Bureau, at San Francisco, has been named assistant general freight agent in charge of the rate bureau at Portland. **L. C. Bouchard,** general freight agent for the SP's Texas & Louisiana Lines at Dallas, retired March 31 after 47 years of service.

Mr. Nelson joined the freight department of the SP at San Francisco in 1908. He was in military service from 1917 to 1919, returning to the SP in 1920. After serving in various capacities, he became freight traffic manager, Central district, at San Francisco in 1942, and freight traffic manager, Northern district, at Portland in 1943.

Mr. Ordway joined the SP in 1930. After advancing through a number of positions in the freight department, he was named general freight agent at Portland in 1954.

**TOLEDO, PEORIA & WESTERN.—Arthur J. Miller** has been appointed Eastern traffic manager at New York.

**WATERLOO, CEDAR FALLS & NORTHERN.—Wayne S. Galloway** has been appointed assistant to traffic manager at Waterloo, Iowa, succeeding **N. F. Drilling,** who has retired after 38 years of service.

## OBITUARY

**Thomas W. Demarest,** 87, who retired in 1938 as general superintendent motive power of the **Pennsylvania** at Philadelphia, died March 7.

**Charles H. Clark,** 62, western traffic manager of the **Delaware & Hudson** at Chicago, died March 21 at Glens Falls, N. Y.

**Ernest W. Saville,** 69, who retired in 1954 as assistant general freight agent of the **Pennsylvania** at Pittsburgh, died March 21 at Chicago.

**Earl L. Wheeler,** 66, assistant freight claim agent of the **Chicago & North Western** at Chicago, died March 22 in that city.

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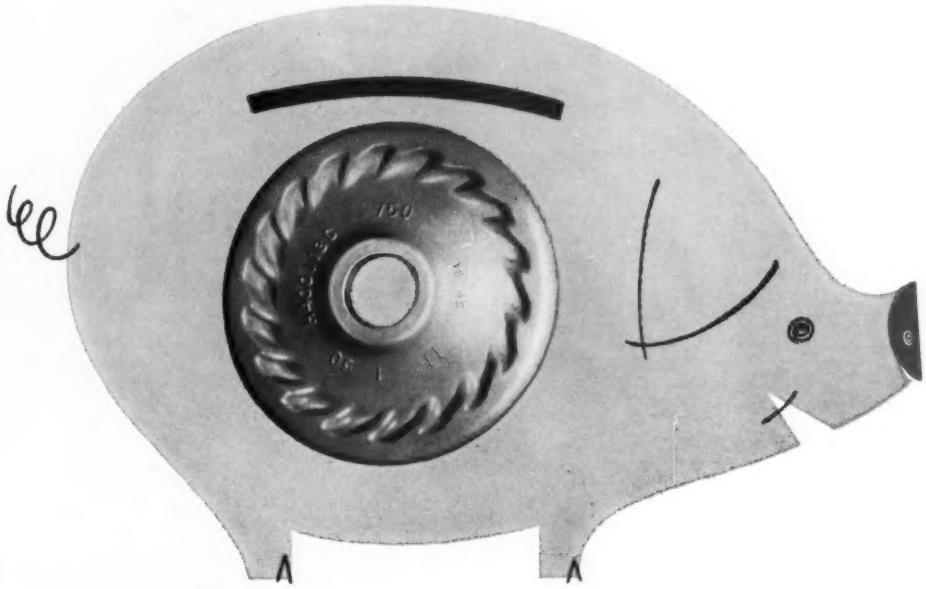

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